

# ULTRA GTP

*Ready-To-Rip!*



## 1:8 SCALE NITRO POWERED TOURING CAR



**PRE-ASSEMBLED**

ASSEMBLED CHASSIS WITH RADIO AND ENGINE INSTALLED

### RTR INSTRUCTION MANUAL



#### SAFETY PRECAUTIONS

This radio control models is not a toy!

- First time builders should seek the advice from people having building experience in order to assemble the model correctly and to produce it's performance to full extent.
- Assemble this kit and places out of children's reach!
- Take safety precautions while operating this model. You are responsible for this models assembly and safe operation!
- Always keep this instruction manual ready at hand for quick reference, even after completing the assembly.

\*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.



# REQUIRED FOR OPERATION

## THINGS NEEDED

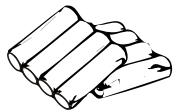
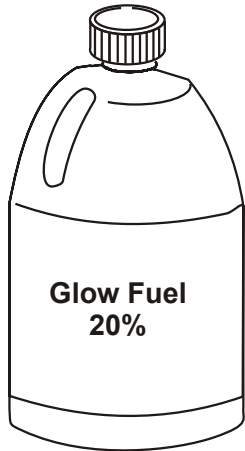
You will need to buy a few items to start the engine and run the car.

- Use 20% nitro CAR fuel. Do not use airplane or heli fuels, they will over heat engine.

- Buy long glow plugs, like OFNA/PICCO Plug (#51007). Use plugs without idle bar. Do NOT buy hot plugs, like the MC-59.

In your box you will find..

- #10163 - Bottle, spout top
- #10218 - Red "C" size glow heater



AA Batteries ( 12 pcs )

You need to get batteries for the radio transmitter and the car receiver packs.

- Radio TX needs (8) eight AA batteries
- Car needs (4) four AA batteries.



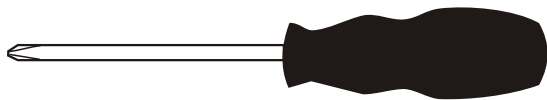
#10211 NiHm Flat Pack

Recommendation Option:

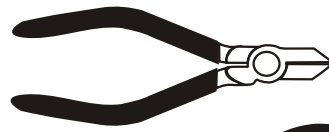
You may want to upgrade the car battery pack to a Ni-Cad or NiHm 5 cell type(600AE). This will give more run time. OFNA #10211 1000NiMh Flat Pack and NiHm Battery Charger #10214



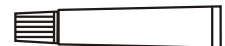
## TOOLS NOT INCLUDED IN KIT



Phillips Type Screw Drivers ( L )



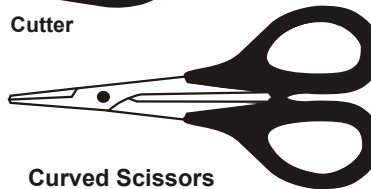
Cutter



Instant Cement



Phillips Type Screw Drivers ( S )



Curved Scissors



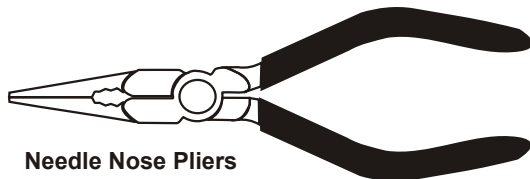
Masking Tape



Brush



Cross Wrench  
#17109 \$3.95



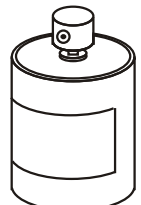
Needle Nose Pliers



Glow Plug & 17MM Cross Wrench  
#10801 \$6.95



Knife



Paints



Grease



# READ THIS BEFORE RUNNING

Running a nitro kit is fun and easy, but to make this a safe and good experience you must observe a few rules. This kit is extremely fast, easily over 40MPH, and can seriously injure someone if you are not careful.

## **Where to run car?**

- Any running area you choose must be dry. Do not run car near any water or wet dirt.
- Do not run on public streets. It is very easy to have the car run over or damaged by hitting the curb.
- Do not operate car in tight confined places. The car is very fast and will easily hit something.
- Do not run near people or animals. The car is very fast and will too easily hit someone.
- Due noise, you will want to consider the surrounding area when operating the car.
- Do not operate the car at night. You will not be able to drive it without hitting something.
- Do not operate the car indoors. Engine exhaust is not healthy.

## **Glow Fuel**

- Glow fuel is poisonous!
- Glow fuel is flammable!
- Do not leave in fuel bottle with lid off at any time.
- Don use any fuel other than glow fuel in this engine.

## **First Time Starting the Engine**

Caution! When starting engine make sure the following is observed.

- Set engine Master needle to 3 turns (rich setting)
- Do not do this alone, get an experienced friend to help at first.
- Fill fuel tank, try not to spill fuel. Do not spill fuel on receiver
- Hold car off the ground, so it will not runaway when first starts
- Turn on Radio and check the linkage before starting engine.
- Turn on car receiver battery switch.
- Always have an air filter on the carburetor to keep dirt out.

## **Engine Break-in**

- See Engine Page.

## **Emergency Stopping Engine When Running**

- Remove air filter and cover carb. intake.
- Squeeze fuel line and hold until engine stops.
- With a rag, cover exhaust outlet.

## **Storing Car After Running**

- Remove fuel from tank and fuel lines
- Turn off radio in car
- Put a few drops of after run in engine to keep it from

rusting.

- Clear oil and dirt from chassis with a degreaser.

## **Precautions**

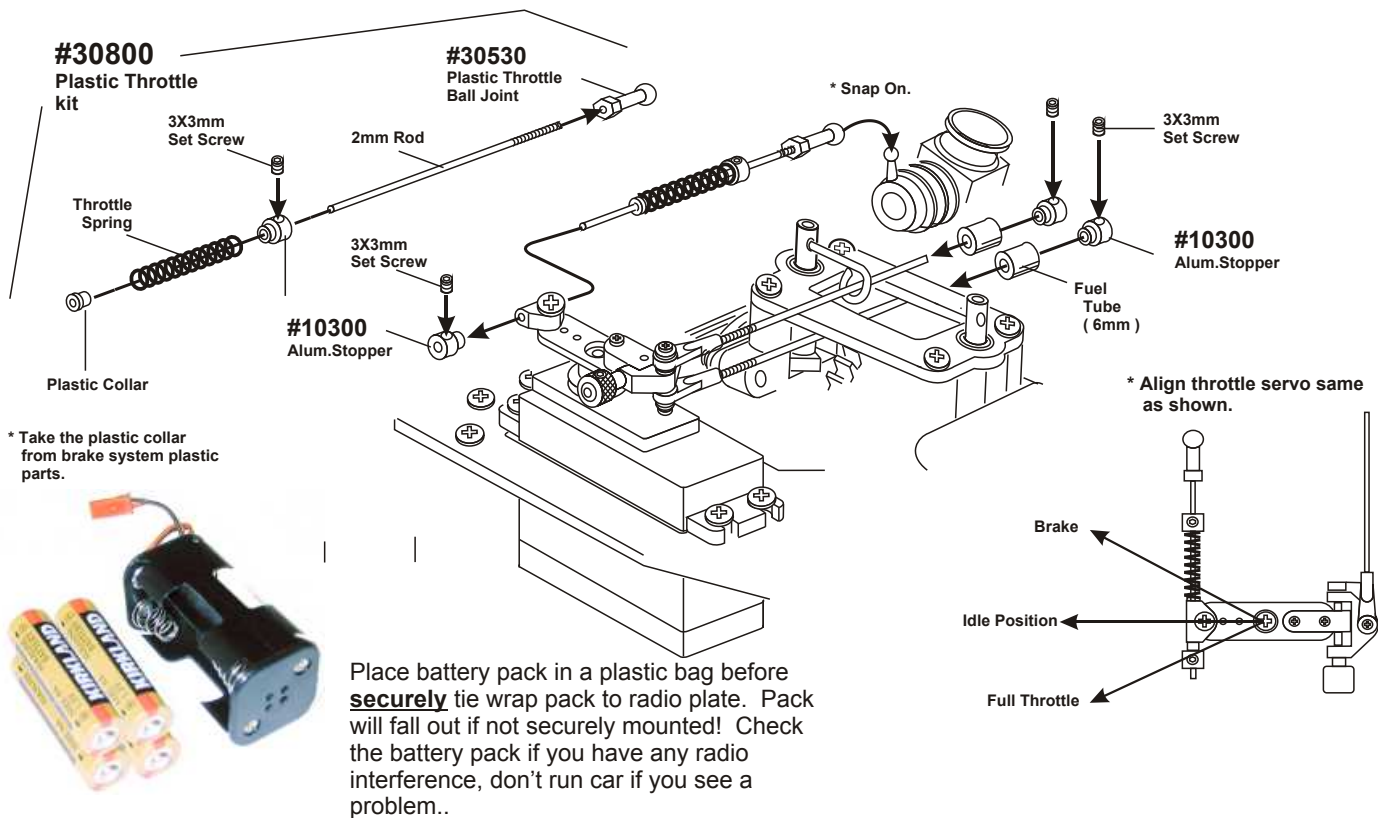
- This kit is not a toy. Always run car with a second person as a spotter and pitman.
  - Hot Parts - The pipe, manifold, engine and head are very hot and will cause burns.
  - Rotating Parts - Keep hands away from the drive train, wheels, and engine when engine is running.
  - Radio - Check batteries life before running the car. If radio does not have full control of the car with steering and/or throttle/brake do not run until corrected. Failure to correct this will result in possible injury and damage to the car or property.
  - Glow fuel - Do leave the glow fuel unattended with the lid off. Fuel contains Methanol and Nitro Methane and is flammable and poisonous.
- Store fuel in cool ventilated location. Refer the glow fuel label for additional precautions.
- Car Fuel tank - Never store fuel in car tank, it will ruin the engine if left in tank.
  - Always turn off the car BEFORE turning off radio.
  - DAMAGE DUE CAR RUN AWAY IS NOT A WARRANTY ISSUE.

**IF YOU DO NOT BREAK-IN ENGINE CORRECTLY, MAINLY AT LOW RPM, YOU WILL BREAK THE CONNECTING ROD!**

**FAILURE TO NOT READ AND FOLLOW BREAK-IN ENGINE INSTRUCTIONS WILL VOID WARRANTY!**



## ASSEMBLY OF THE THROTTLE LINKAGE SYSTEM



## CHECKING ENGINE THROTTLE

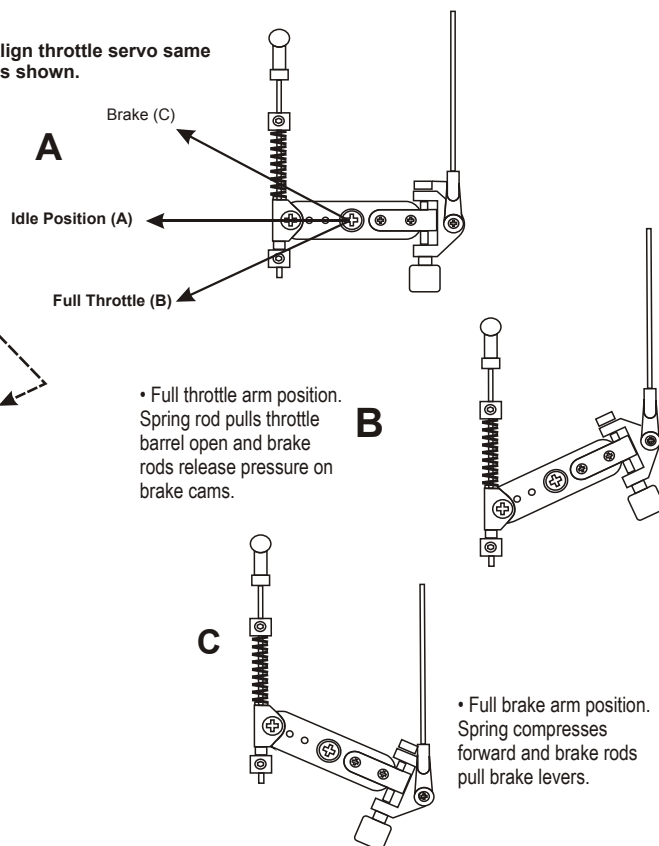
A	B	C
<ol style="list-style-type: none"> <li>1. Insert AA batteries into transmitter (8 Pcs).</li> <li>2. Turn on transmitter.</li> <li>3. Turn on receiver.</li> <li>4. Center throttle trims as shown.</li> </ol>	<ol style="list-style-type: none"> <li>1. Pull Full Throttle.</li> </ol>	<ol style="list-style-type: none"> <li>1. Push trigger to full brake position.</li> <li>2. Adjust alum. Stopper to increase or decrease the brake.</li> </ol>

**IMPORTANT**  
CHECK RADIO THROTTLE  
AND STEERING SWITCHES  
BEFORE RUNNING CAR

\* Insert into transmitter.

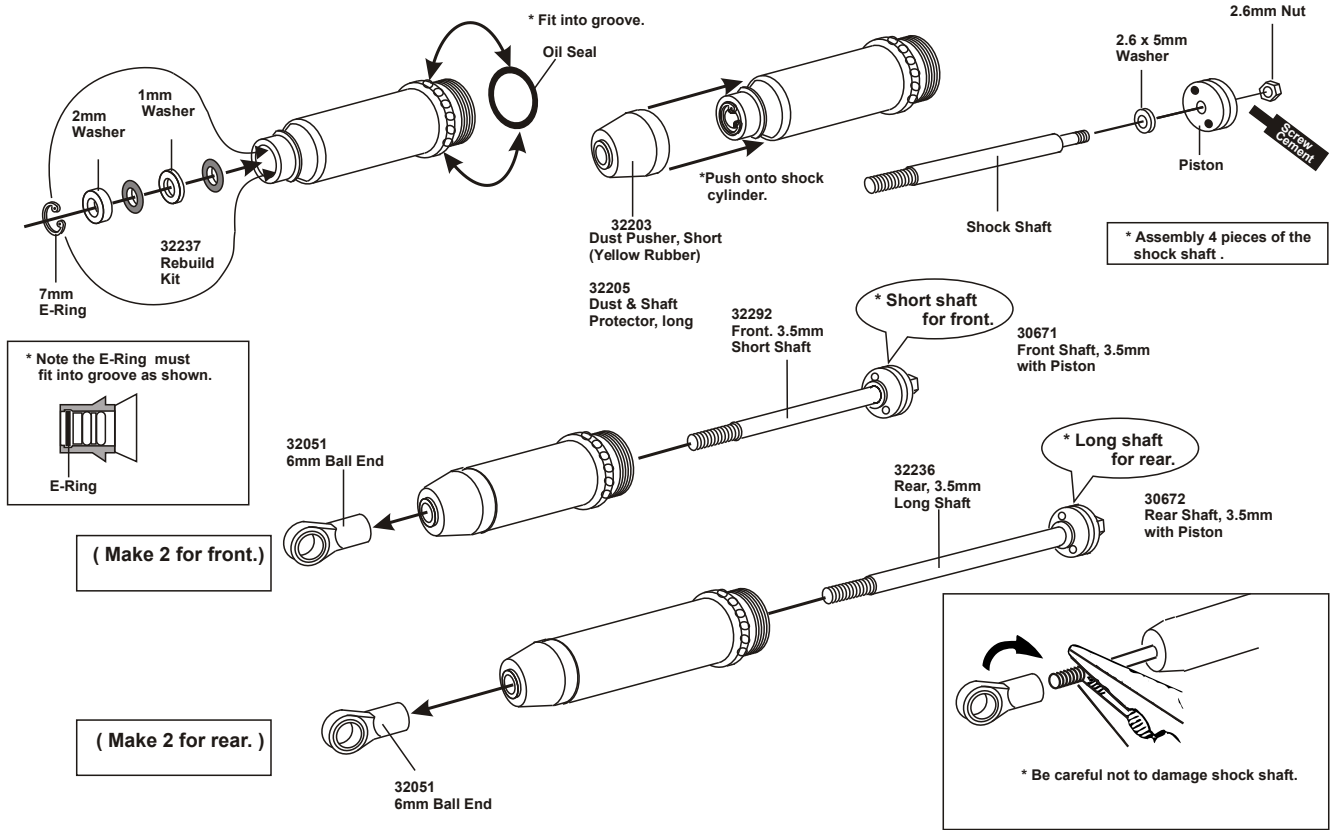


\* Align throttle servo same as shown.





## SHOCK ASSEMBLY

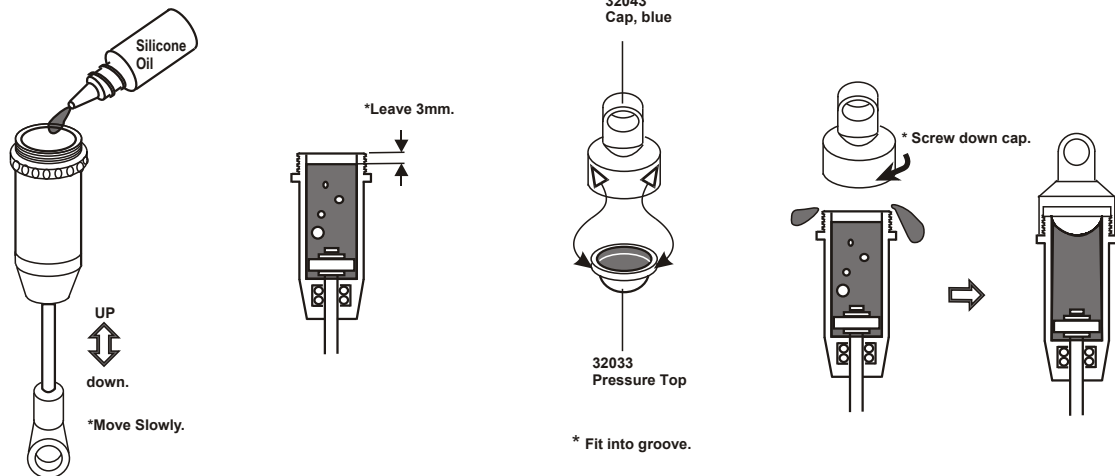


## FILLING THE SHOCKS WITH OIL

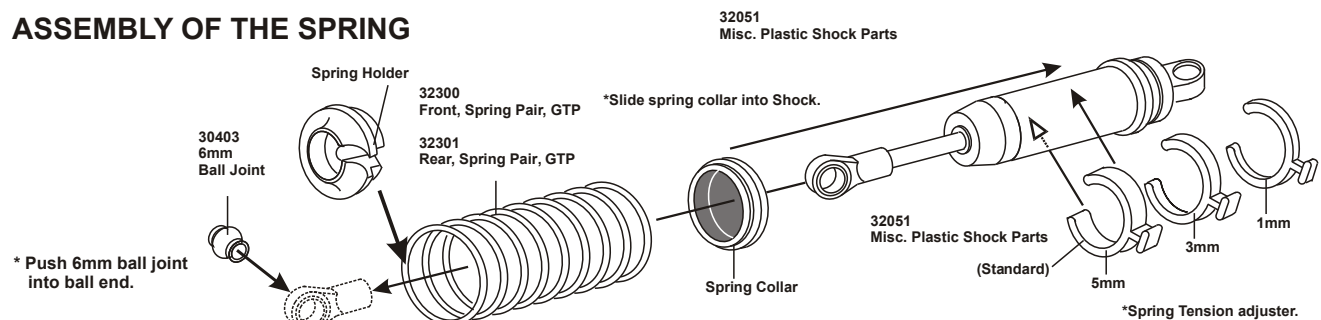
1. Pull down piston and pour oil into shock cylinder. Remove air bubbles by slowly moving piston up and down.

2. Pull down piston, attach pressure top and shock oil overflow with tissue paper.

3. Tighten up shock cap.



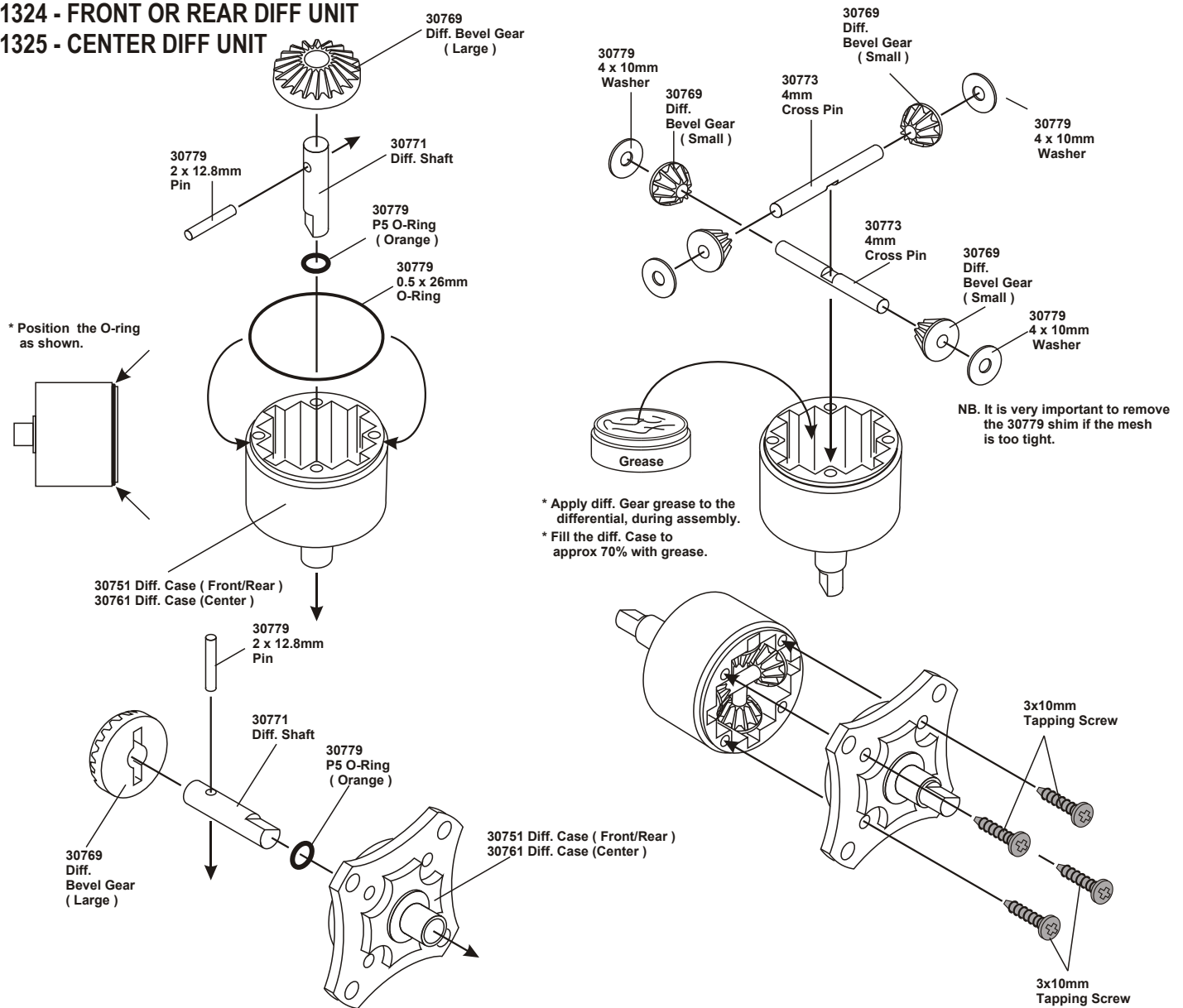
## ASSEMBLY OF THE SPRING





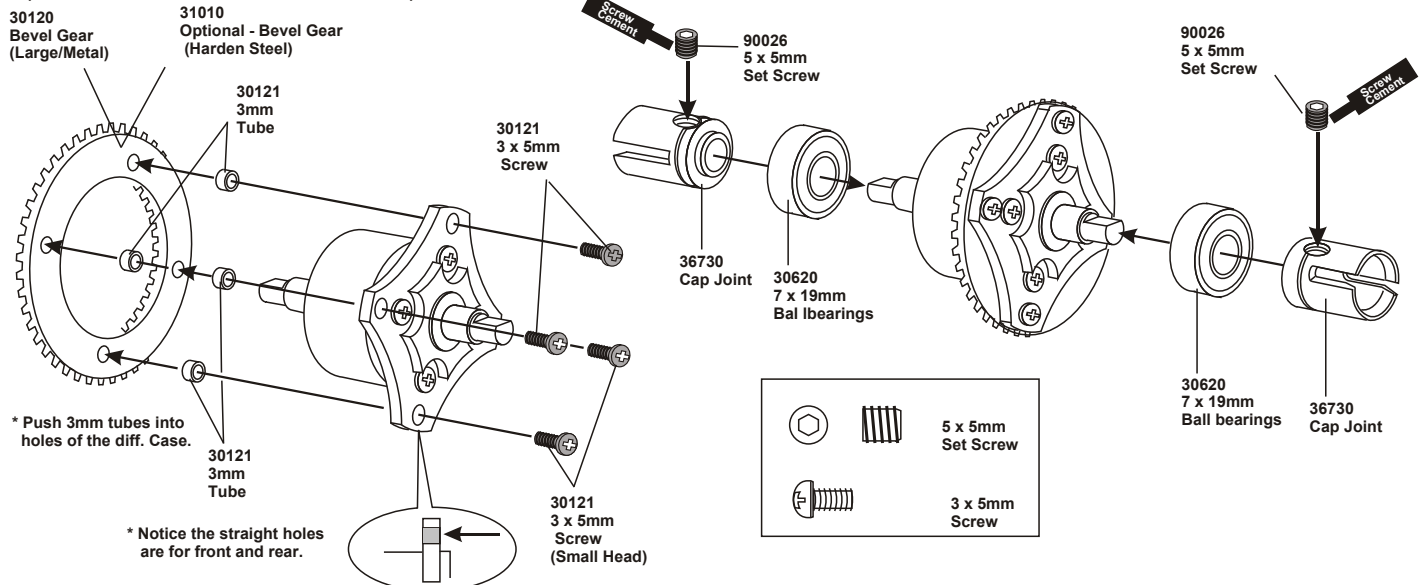
# ASSEMBLY OF NEW "K" STYLE DIFFERENTIAL CASE AND GEARS

## 31324 - FRONT OR REAR DIFF UNIT 31325 - CENTER DIFF UNIT



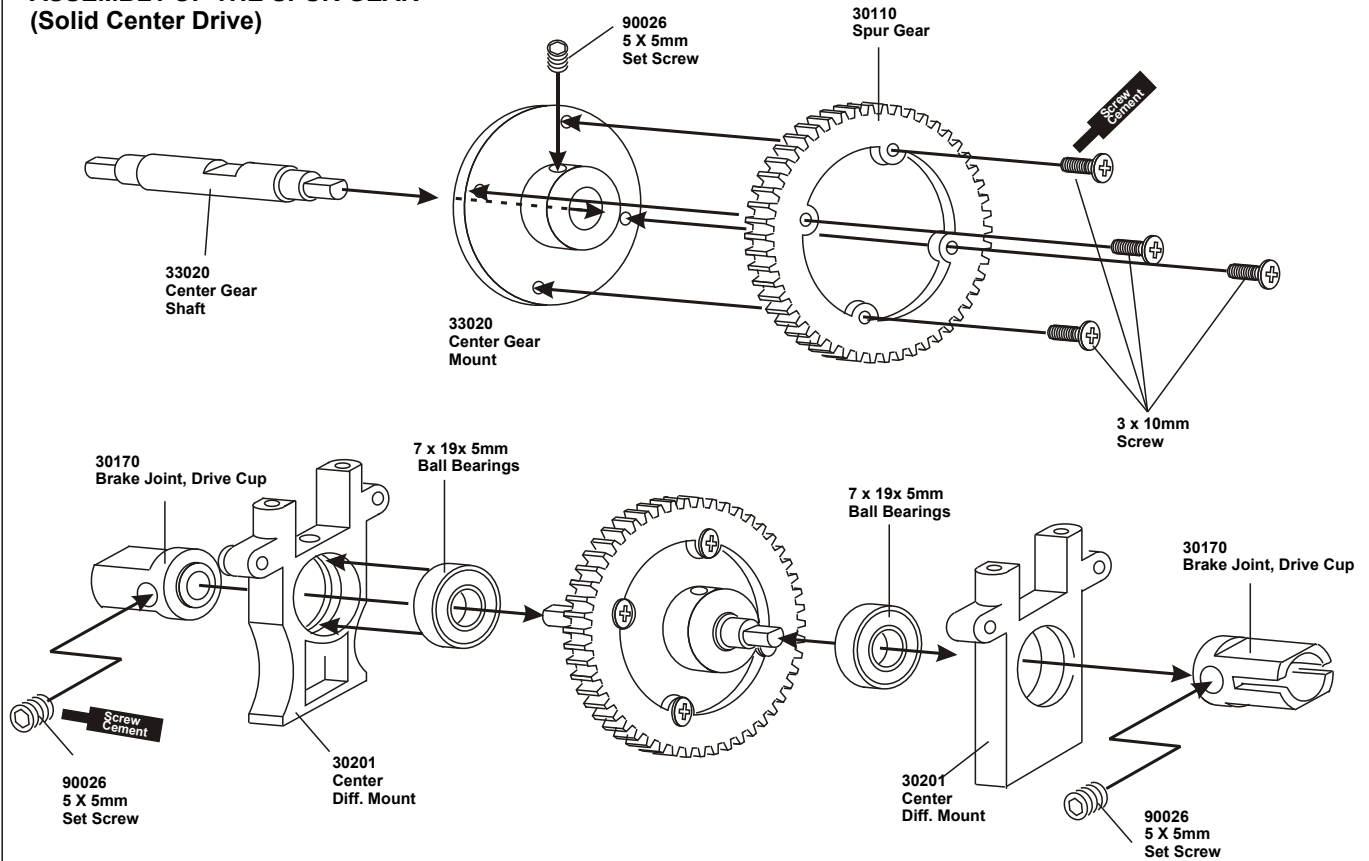
## ASSEMBLY OF THE BEVEL GEAR

( Builds two differentials for front and rear. )

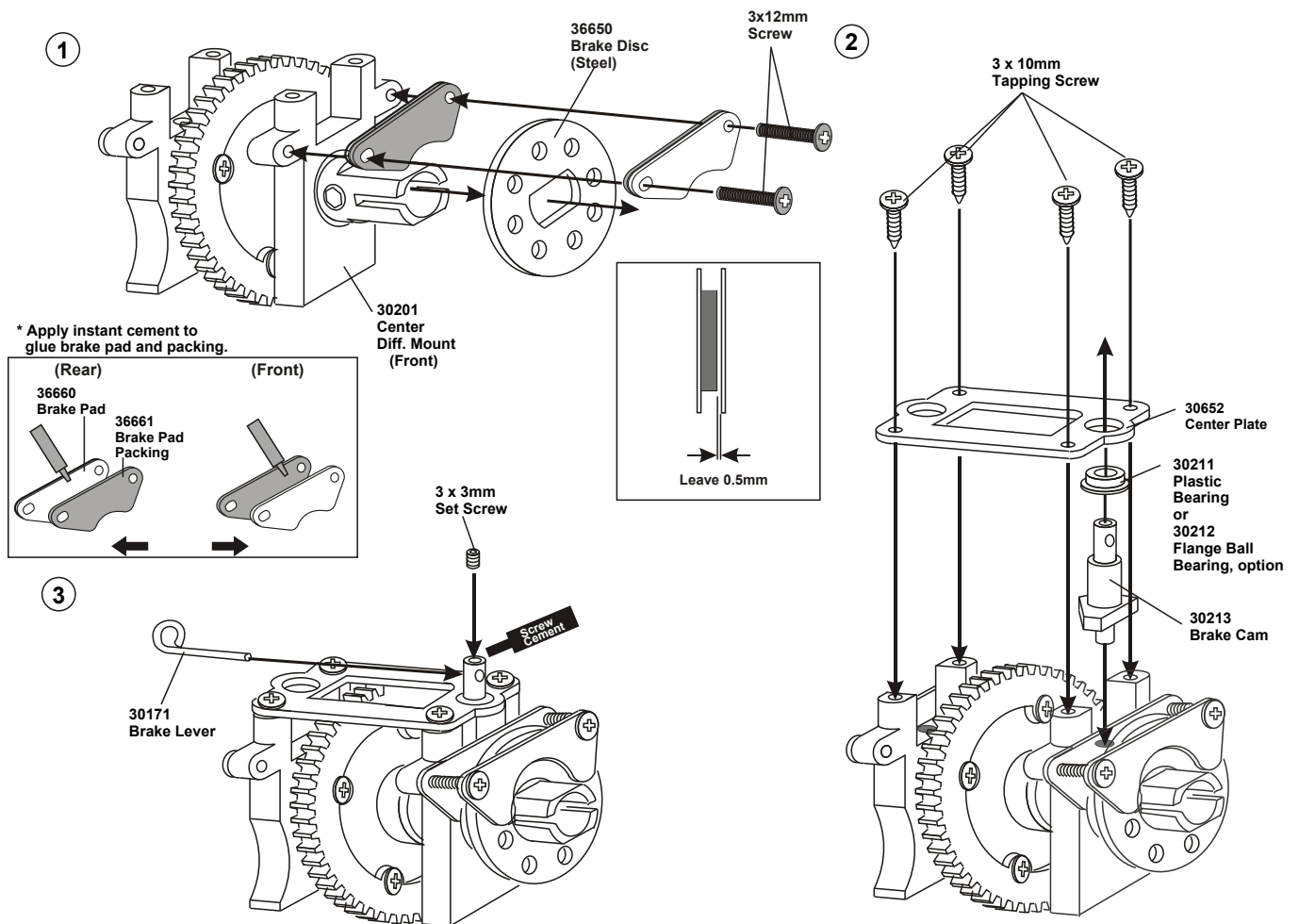




## ASSEMBLY OF THE SPUR GEAR (Solid Center Drive)



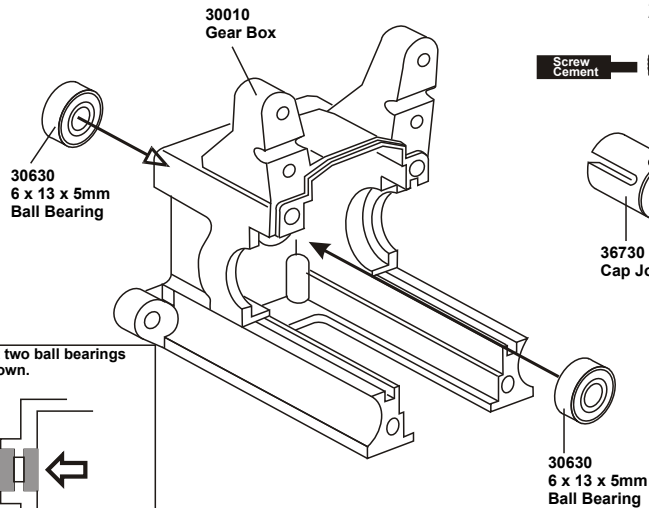
## ASSEMBLY OF THE CENTER PLATE



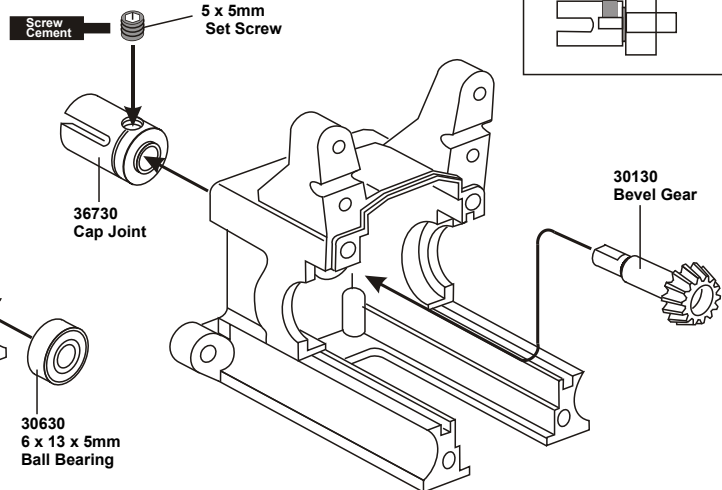


## ASSEMBLY OF THE GEAR BOX ( Assemble two gear boxes for front and rear. )

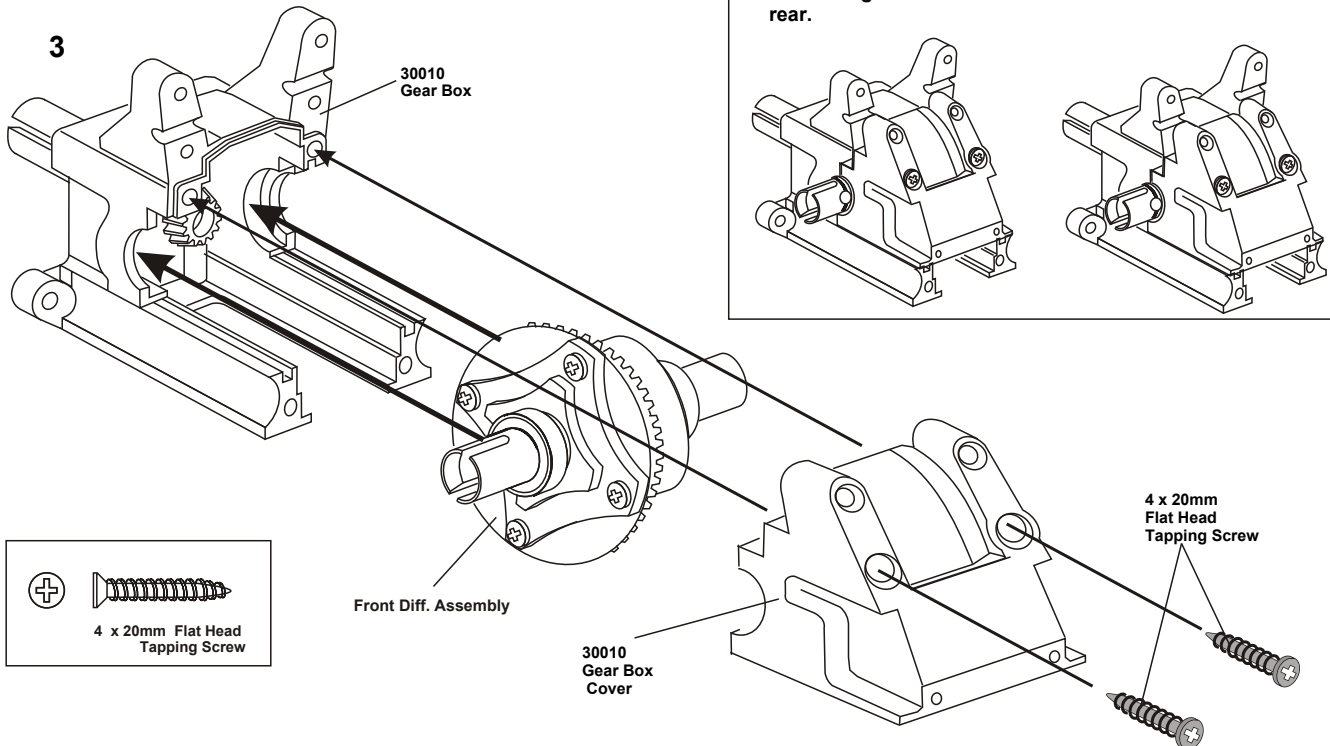
1



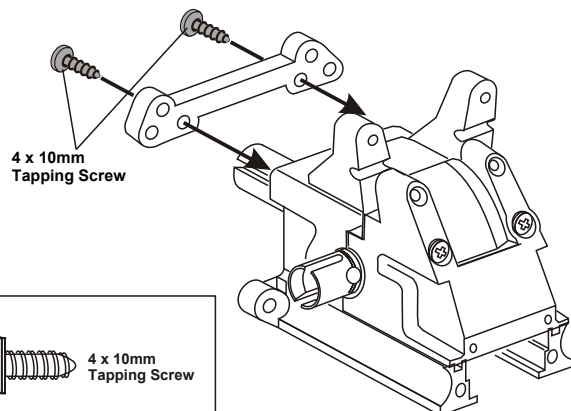
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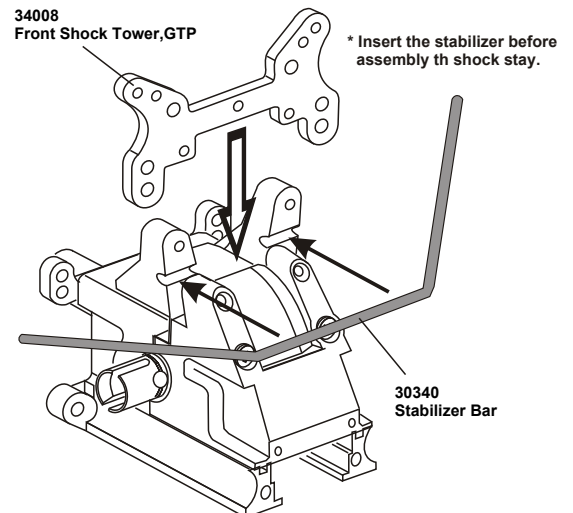
3



## ASSEMBLY OF THE FRONT SHOCK TOWER

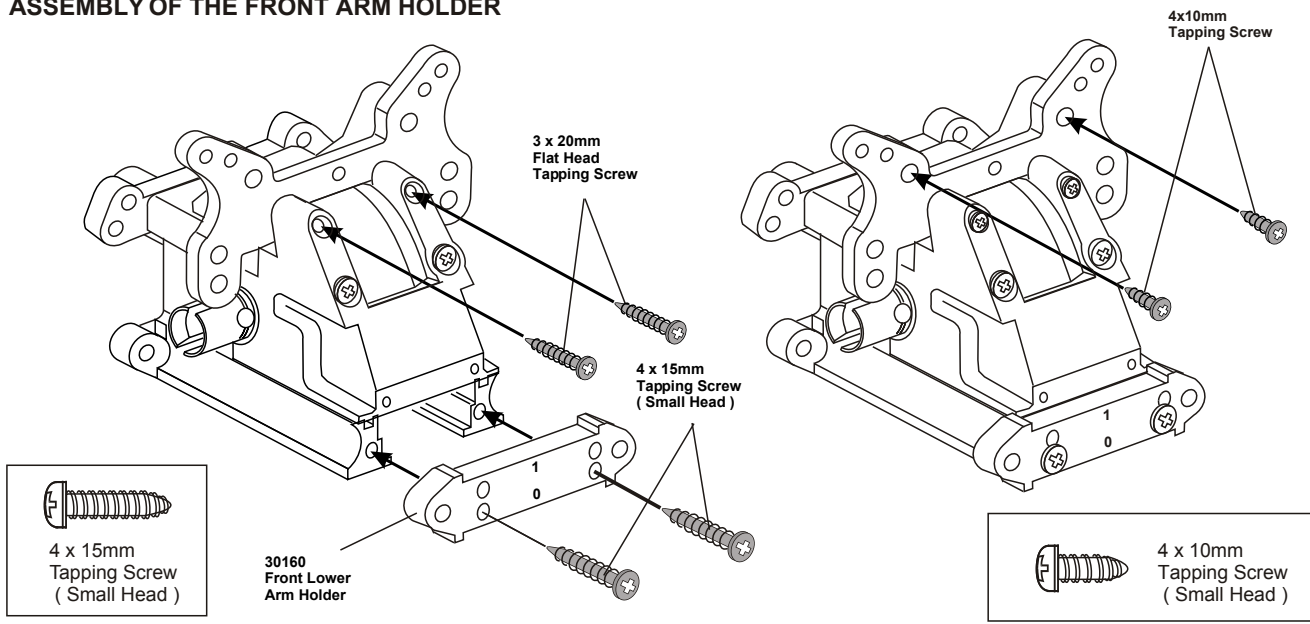


34008 Front Shock Tower, GTP

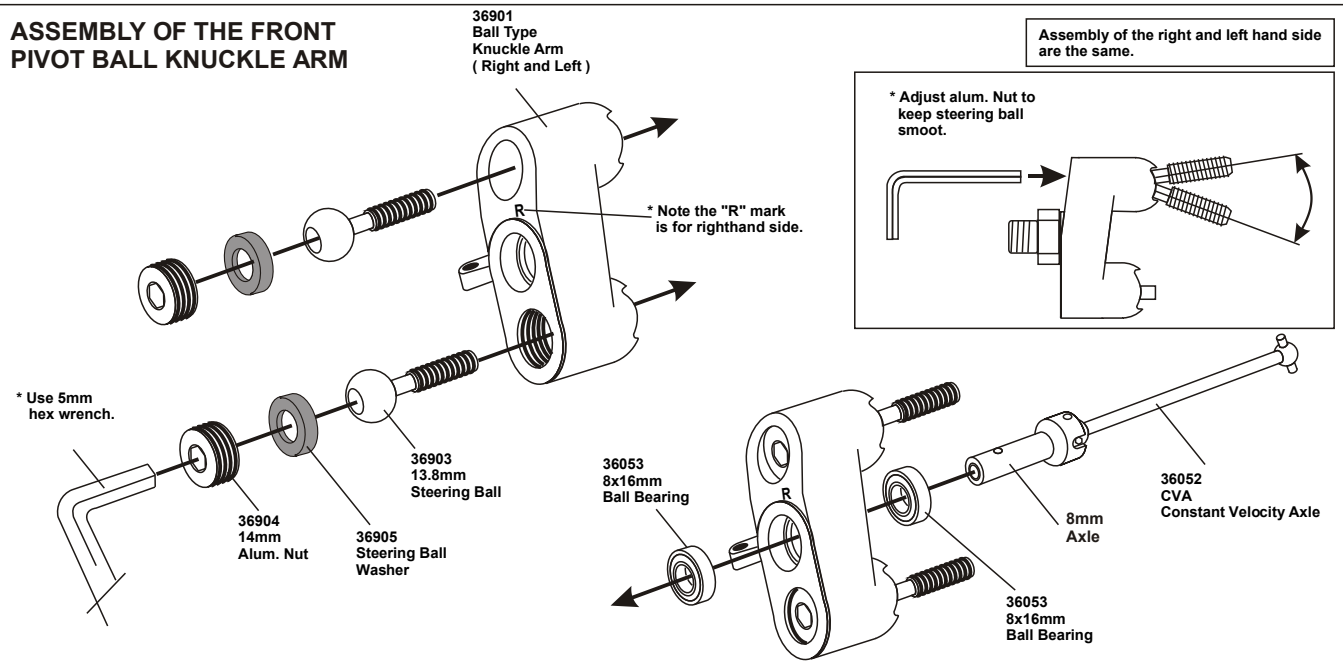




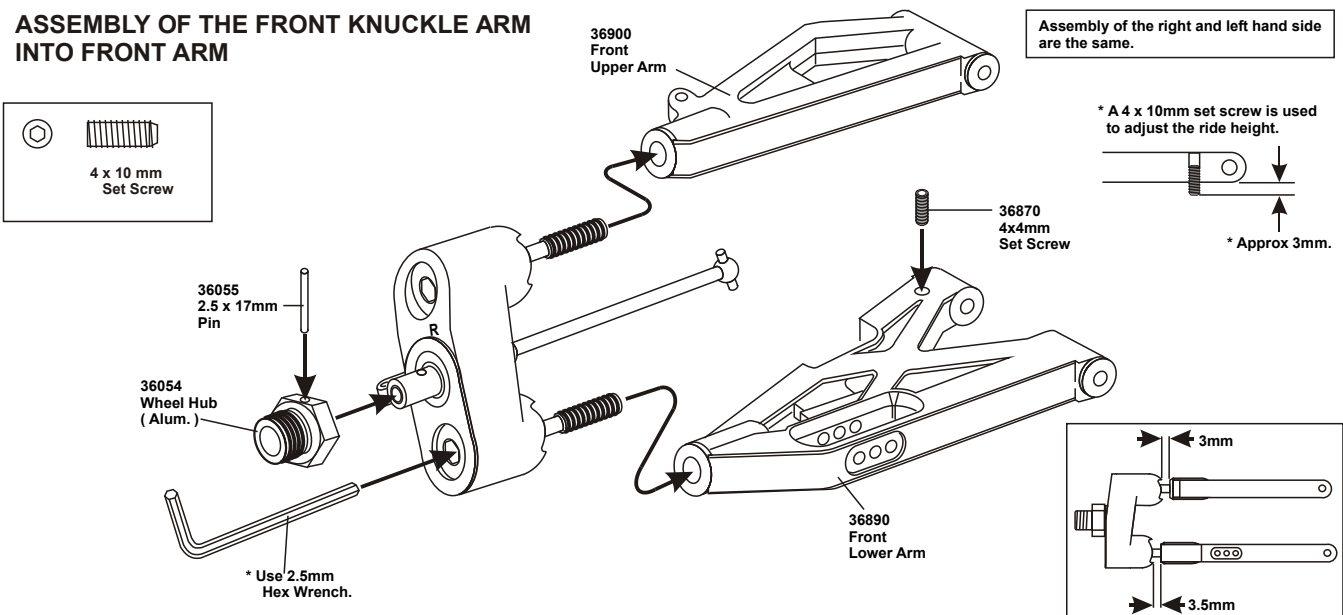
## ASSEMBLY OF THE FRONT ARM HOLDER



## ASSEMBLY OF THE FRONT PIVOT BALL KNUCKLE ARM

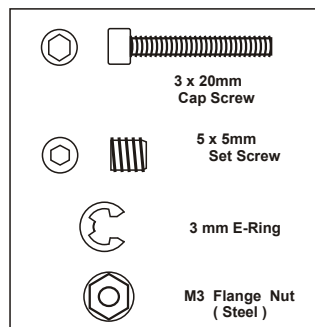


## ASSEMBLY OF THE FRONT KNUCKLE ARM INTO FRONT ARM





## ASSEMBLY OF THE FRONT ARM ONTO GEAR BOX



5x5mm  
Set Screw

\* Do not over tighten  
5x5mm set screw.

\* Insert drive shaft  
before assembly.

3mm  
E-Ring

3x25mm  
Cap Screw

Assembly of the right and left hand side  
are the same.

3mm  
Flange Nut

30151  
Lower Arm Shaft

3mm  
E-Ring

90021  
3mm  
E-Ring

30152  
Upper arm Shaft

3mm  
E-Ring

3 x 3mm Set Screw

3 mm E-Ring

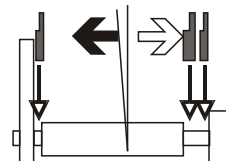
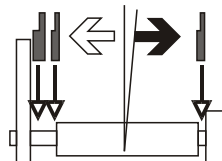
## ASSEMBLY OF THE CASTER ADJUSTER

36905  
Caster Angle  
Adjuster

\* use adjuster to change  
the caster angle .

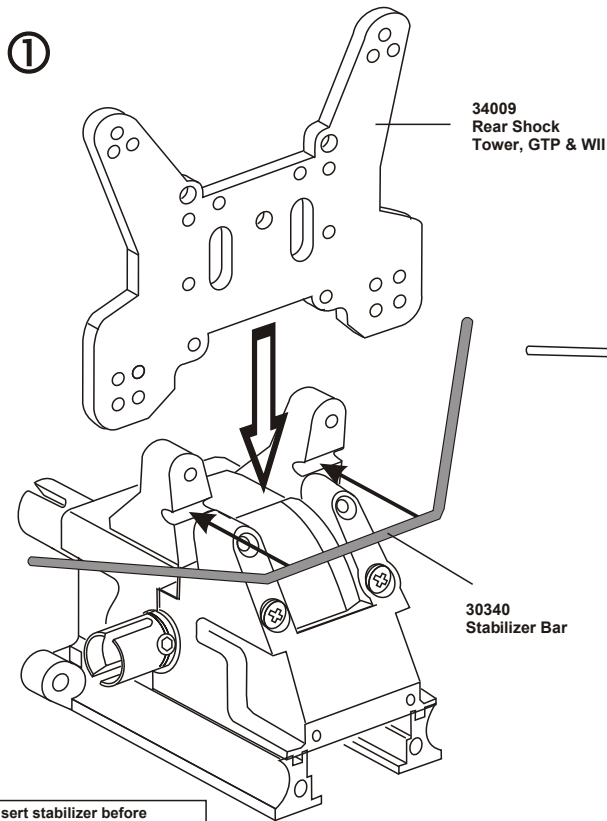
Caster angle will  
become bigger.

Caster angle will  
become less.

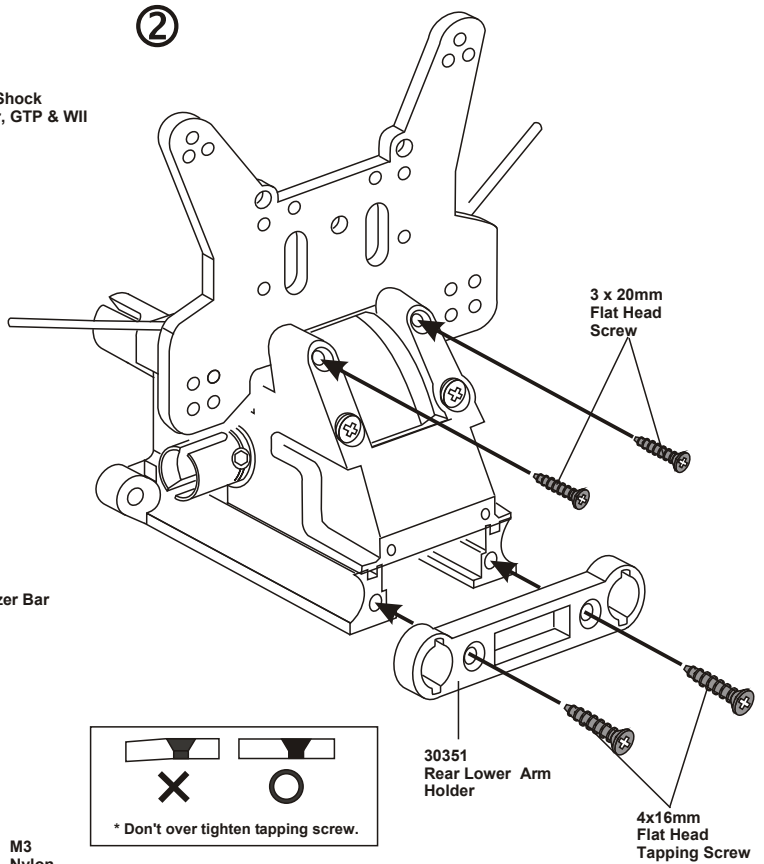




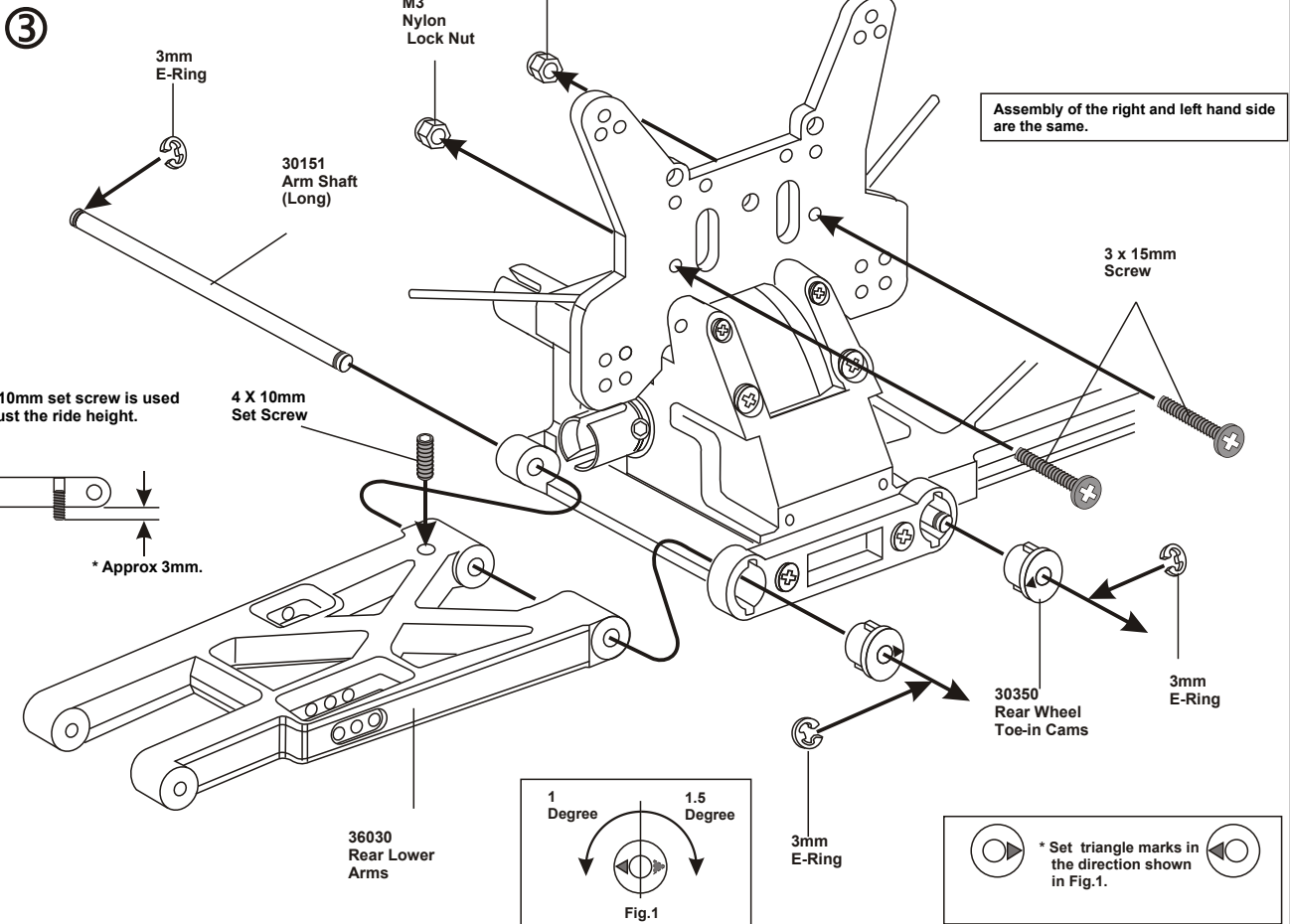
## ASSEMBLY OF THE REAR SHOCK TOWER



\* Insert stabilizer before assembly of the shock tower



\* Don't over tighten tapping screw.



**Assembly of the right and left hand side are the same.**

**\* A 4 x 10mm set screw is used to adjust the ride height.**

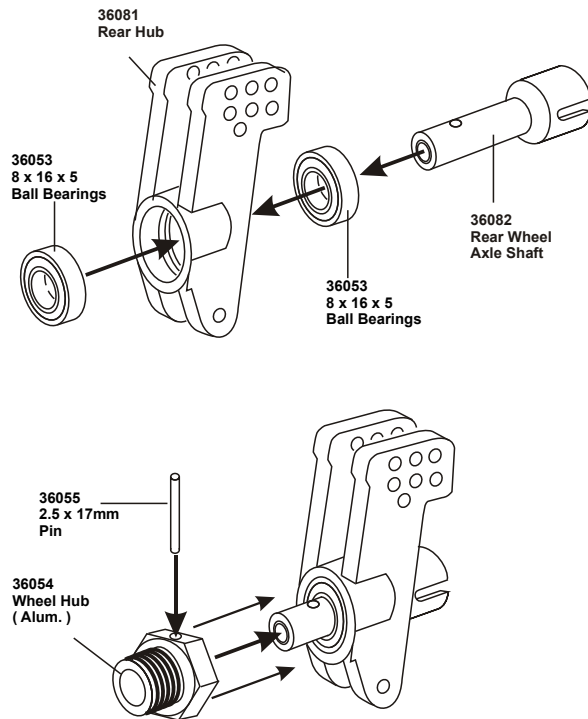
\* Approx 3mm.

### 36030 Rear Lower Arms

\* Set triangle marks in the direction shown in Fig.1.

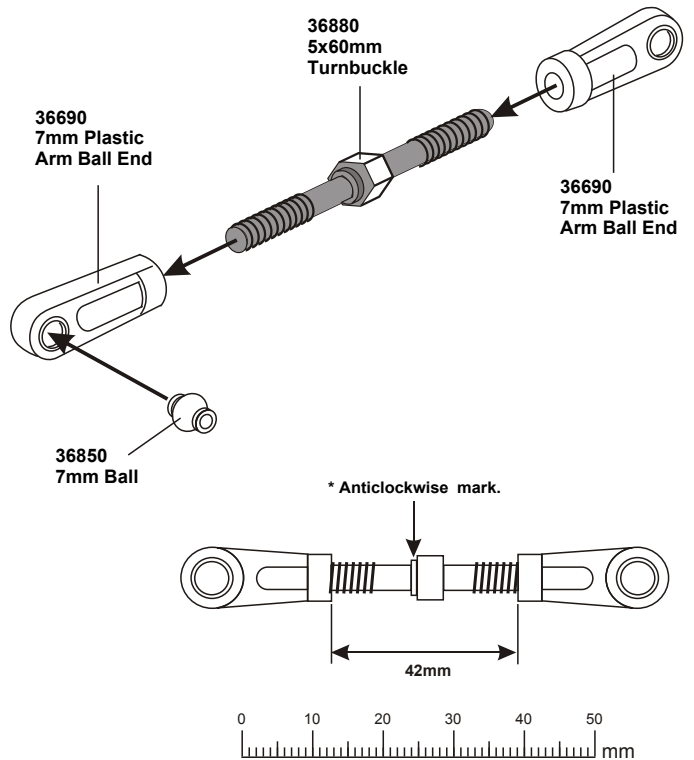


## ASSEMBLY OF THE REAR HUB



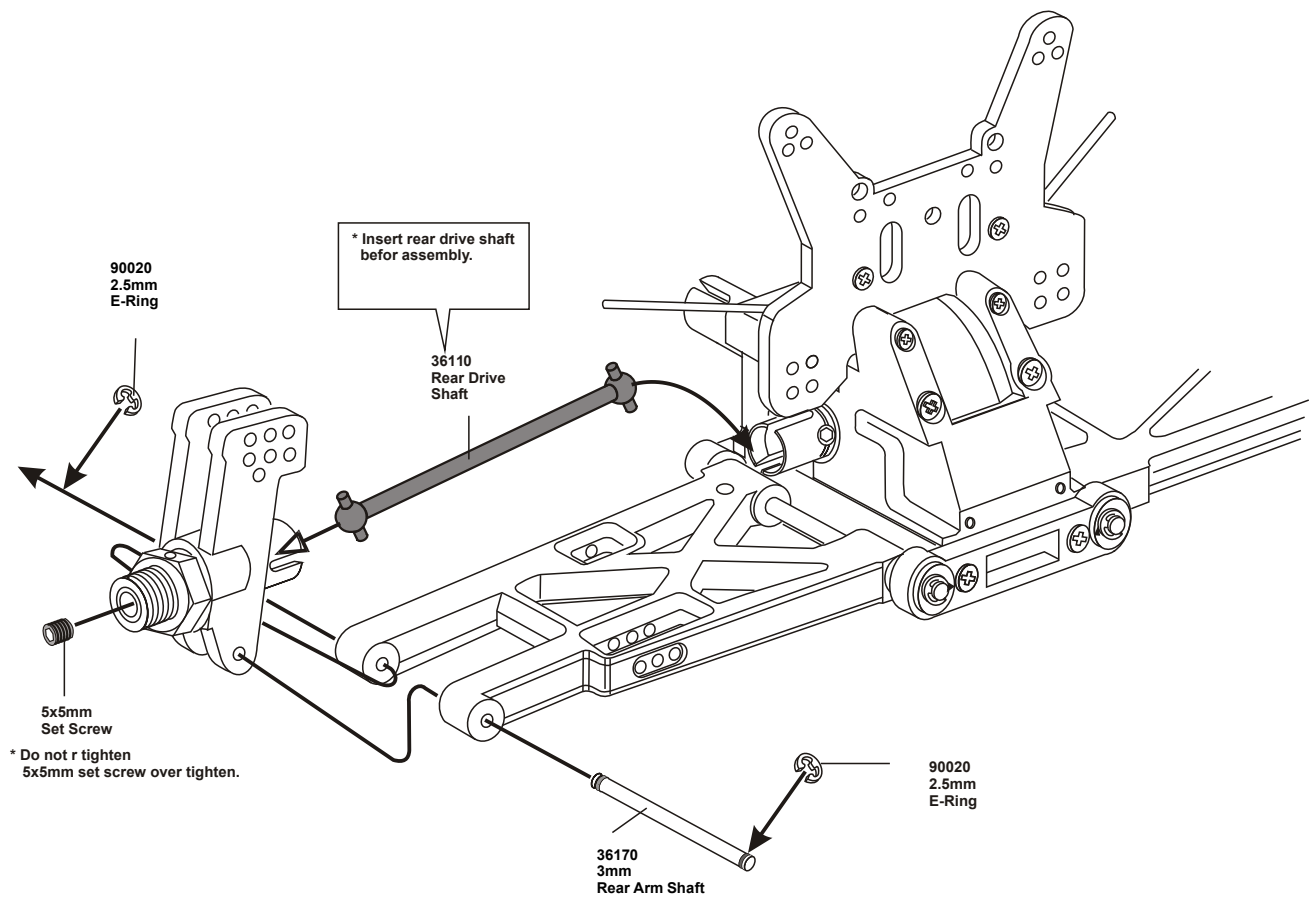
Assembly of the right and left hand side are the same.

\* Builds two upper Rods for left and right side.



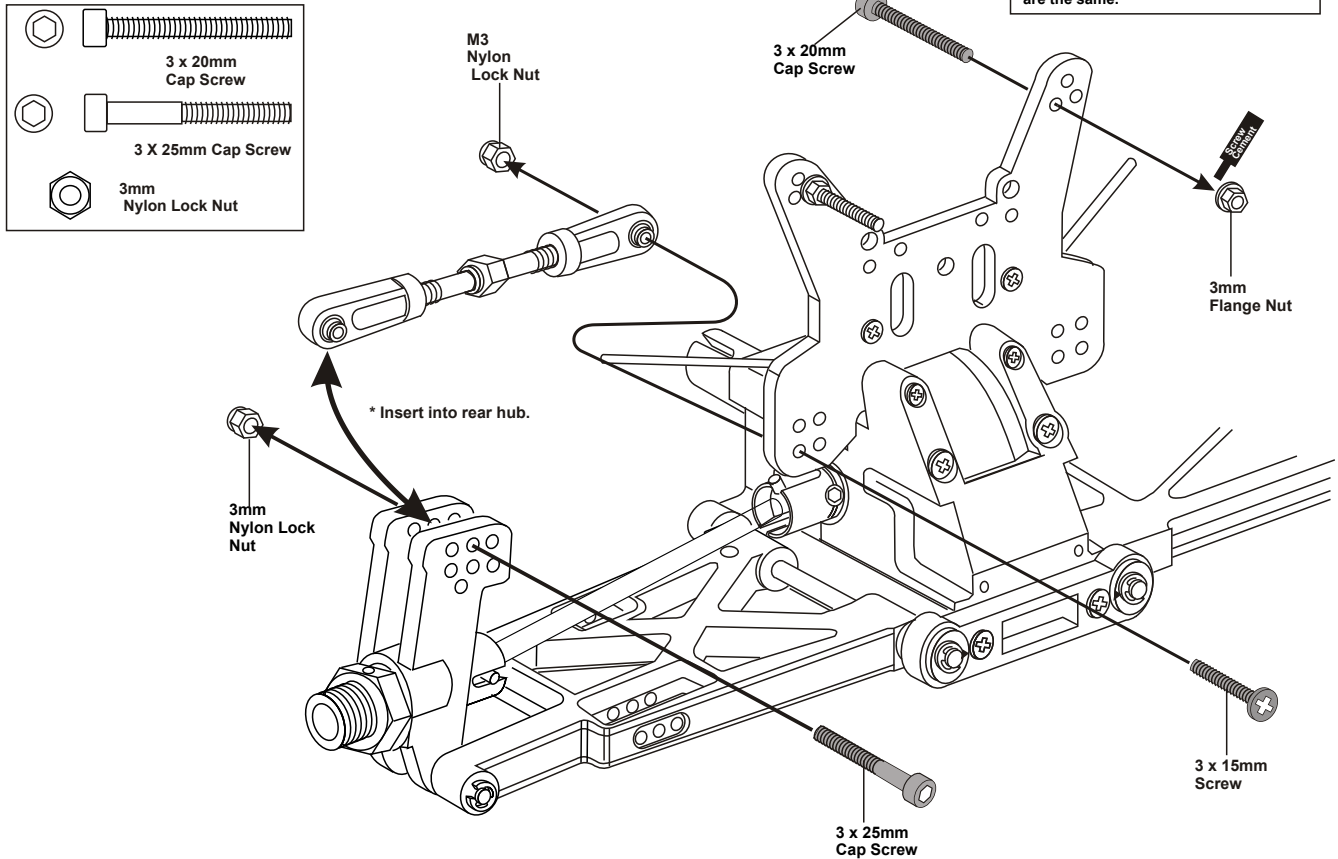
## ASSEMBLY OF THE REAR DRIVE SHAFT

Assembly of the right and left hand side are the same.

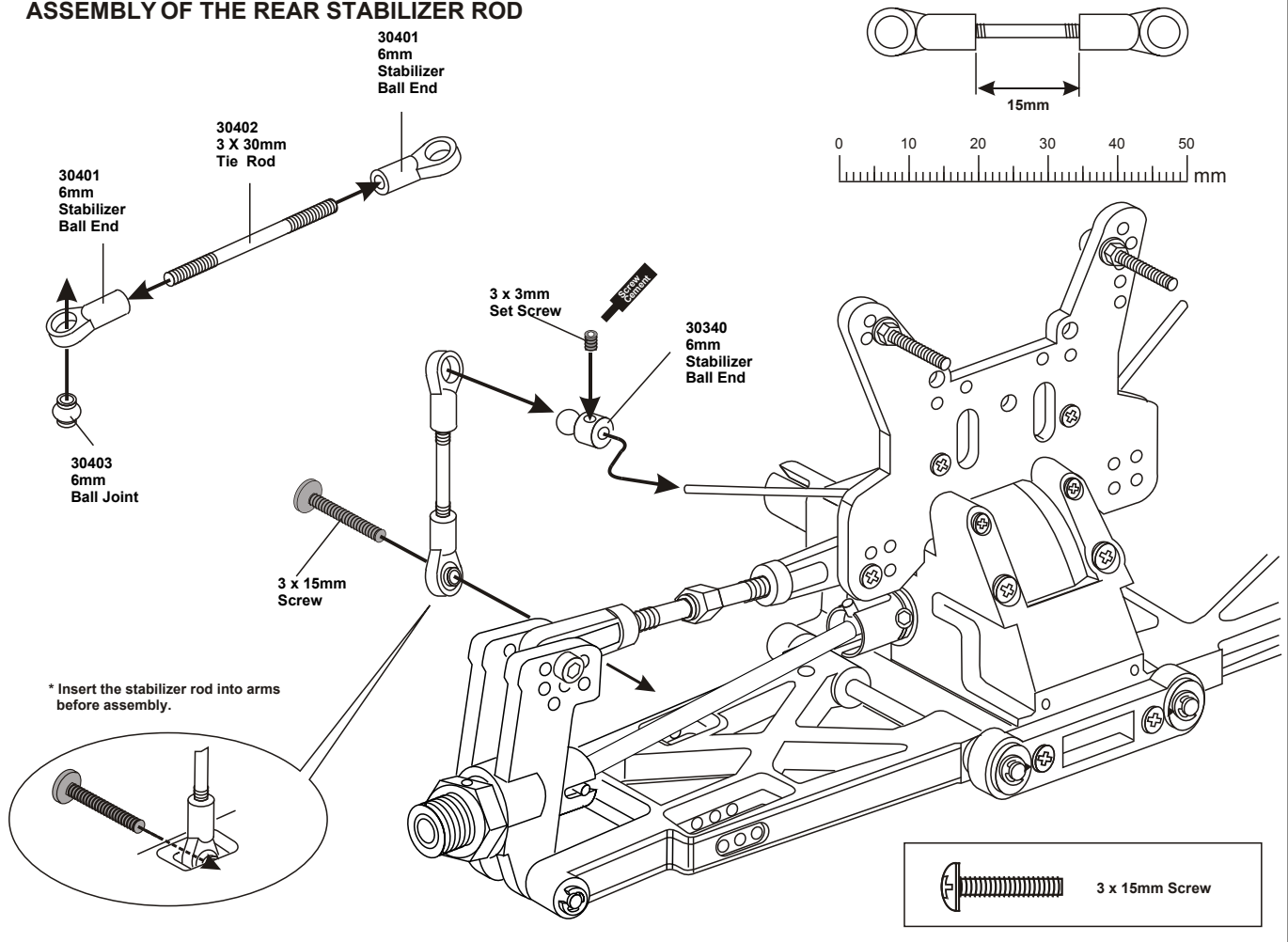




## ASSEMBLY OF THE REAR UPPER ARM ROD



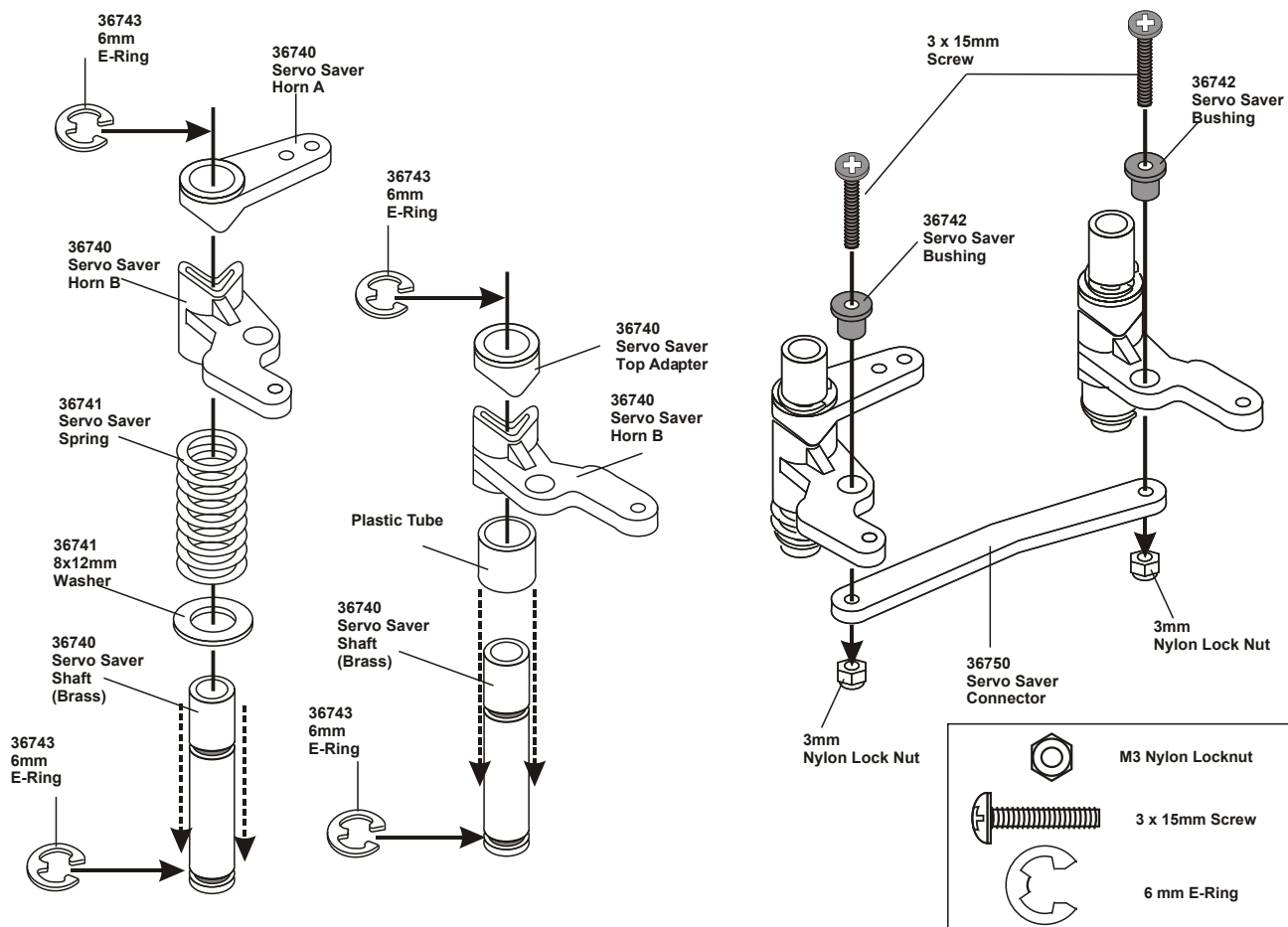
## ASSEMBLY OF THE REAR STABILIZER ROD





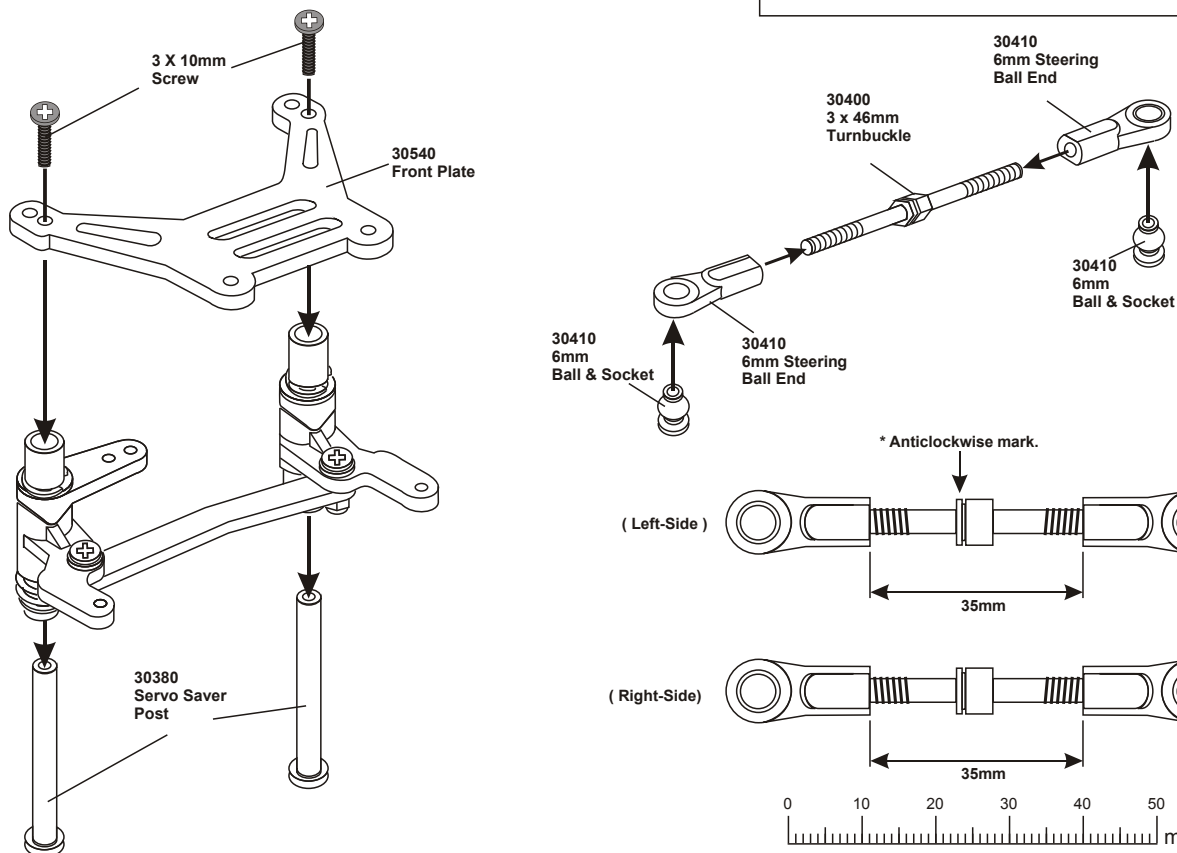
## ASSEMBLY OF THE SERVO SAVER

(36740 Servo Saver Plastic parts)



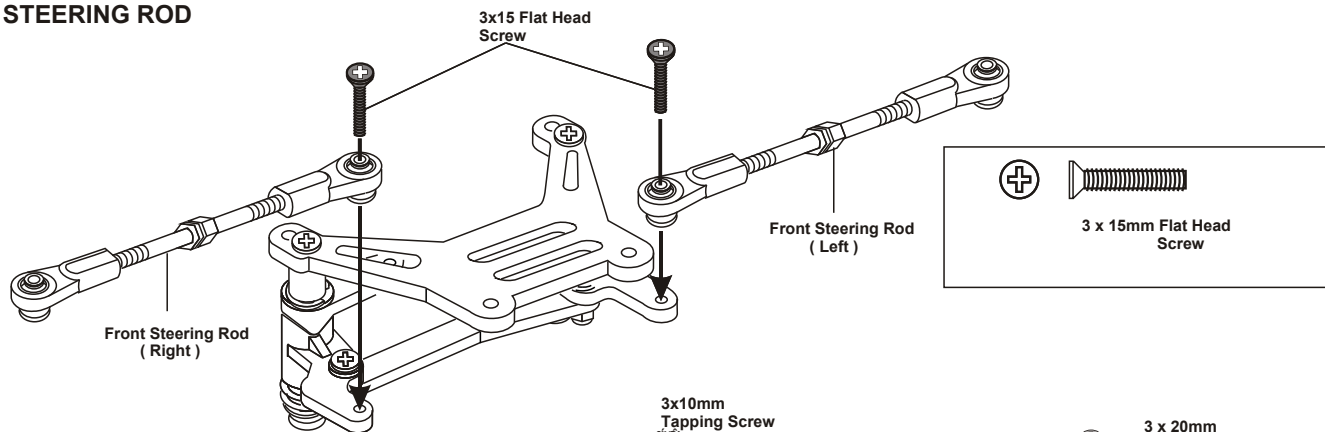
## ASSEMBLY OF THE FRONT PLATE AND STEERING ROD

\* Made two steering rods for left and right-side.

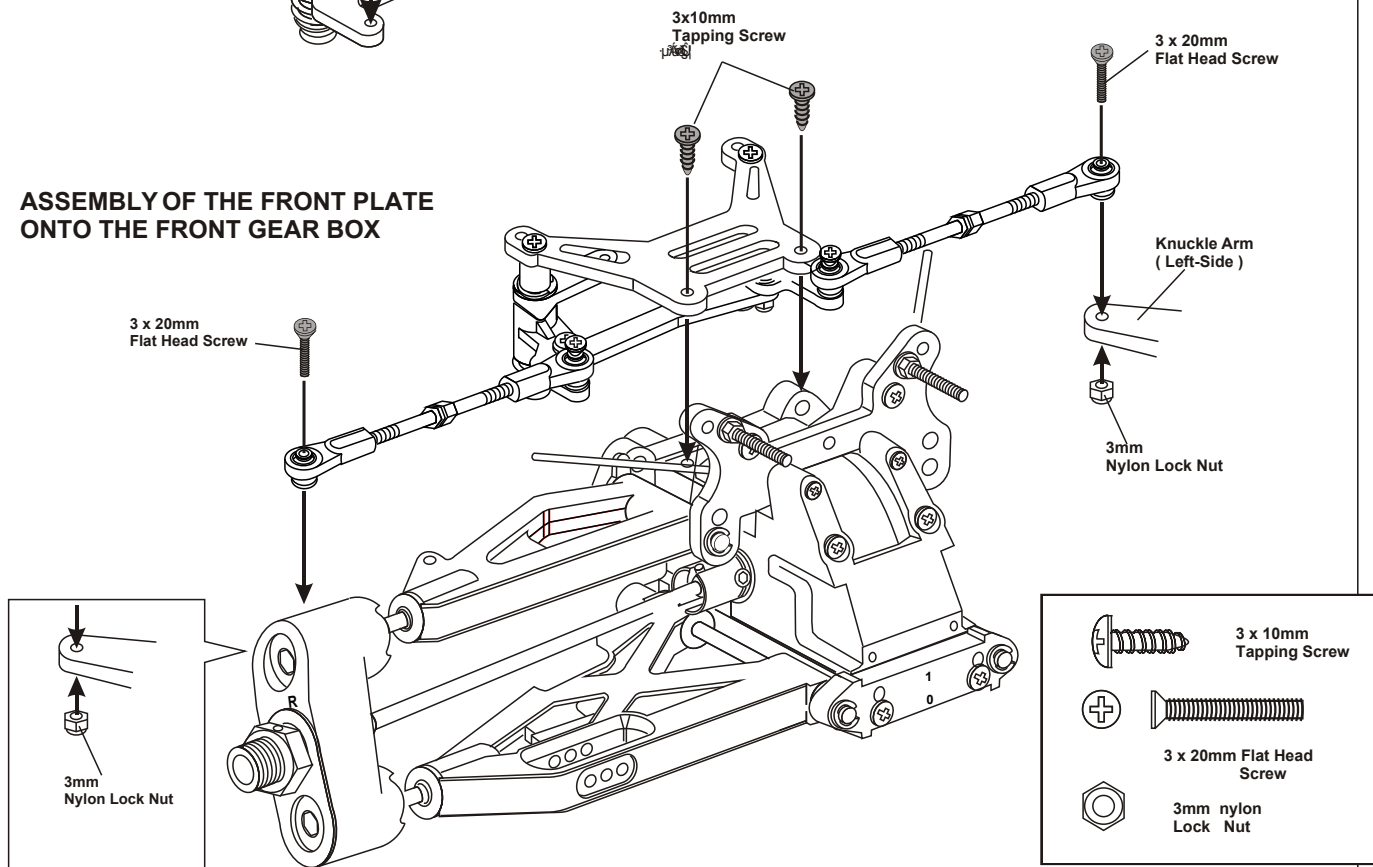




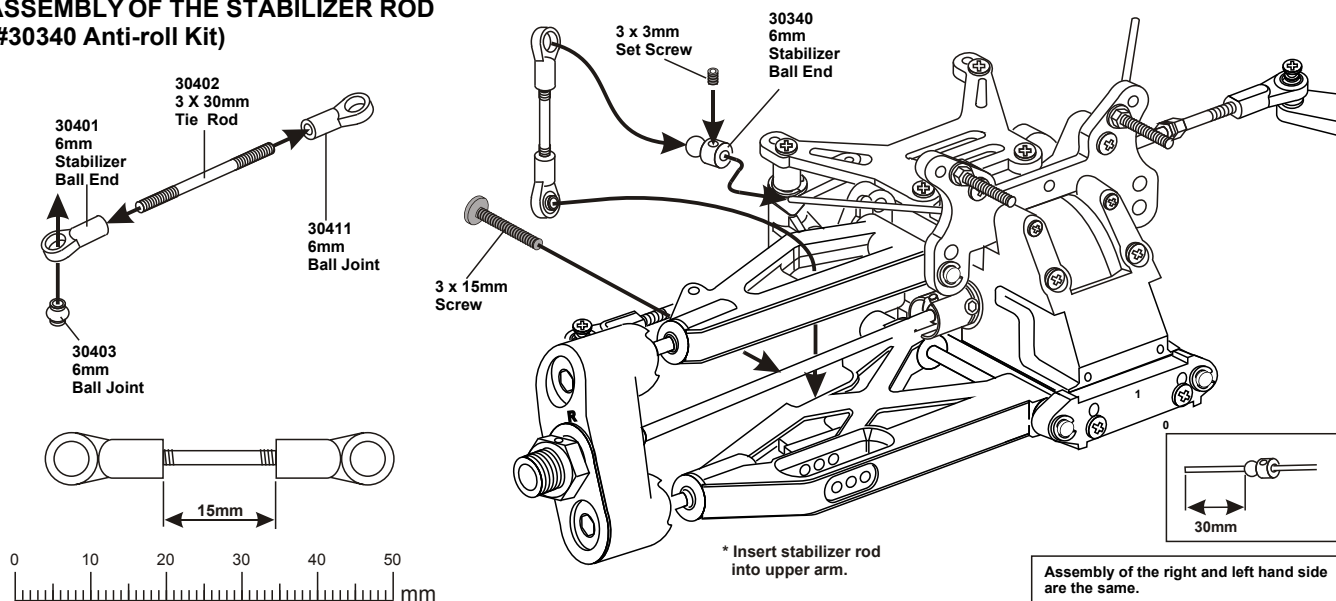
## ASSEMBLY OF THE FRONT PLATE AND STEERING ROD



## ASSEMBLY OF THE FRONT PLATE ONTO THE FRONT GEAR BOX

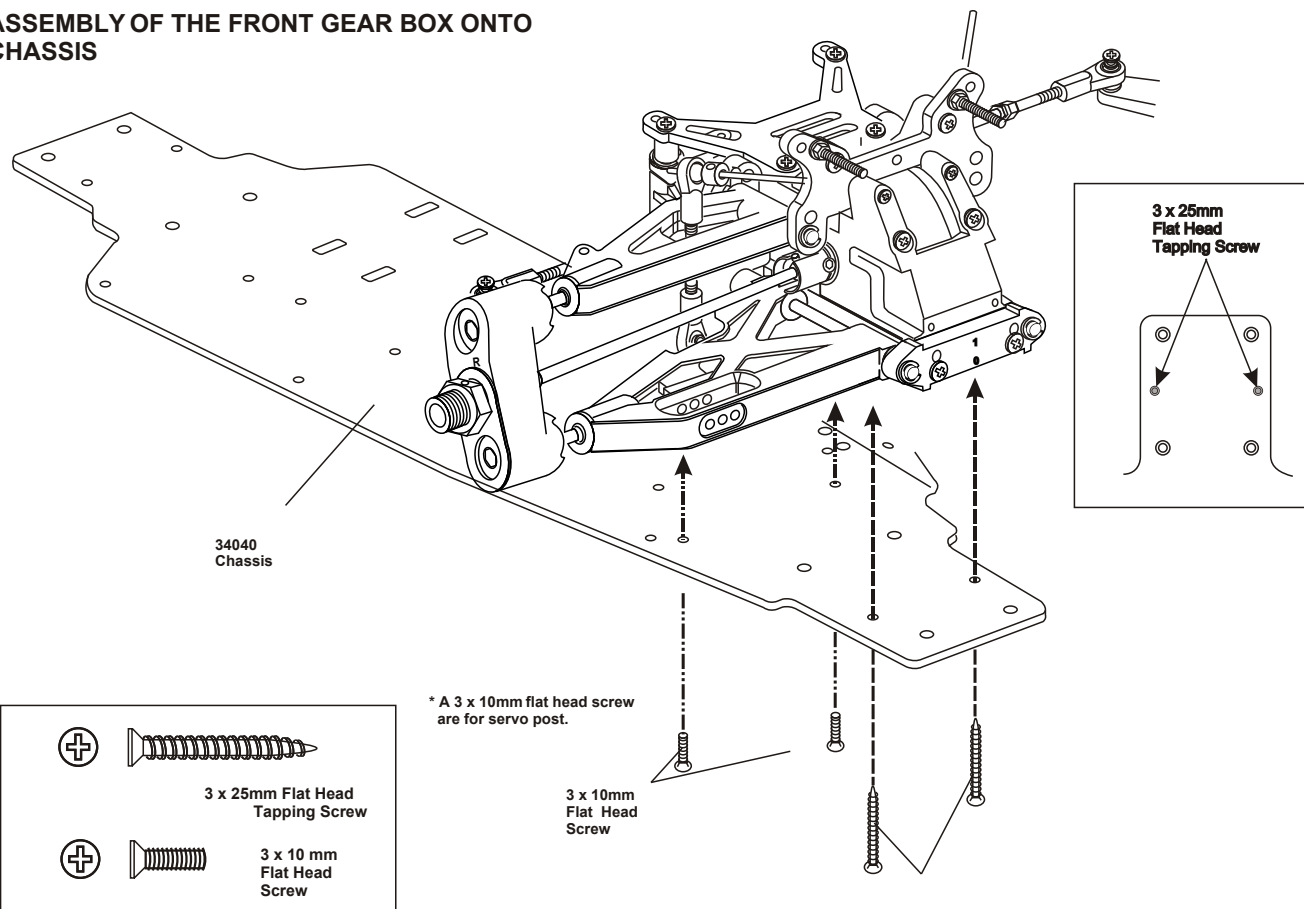


## ASSEMBLY OF THE STABILIZER ROD (#30340 Anti-roll Kit)

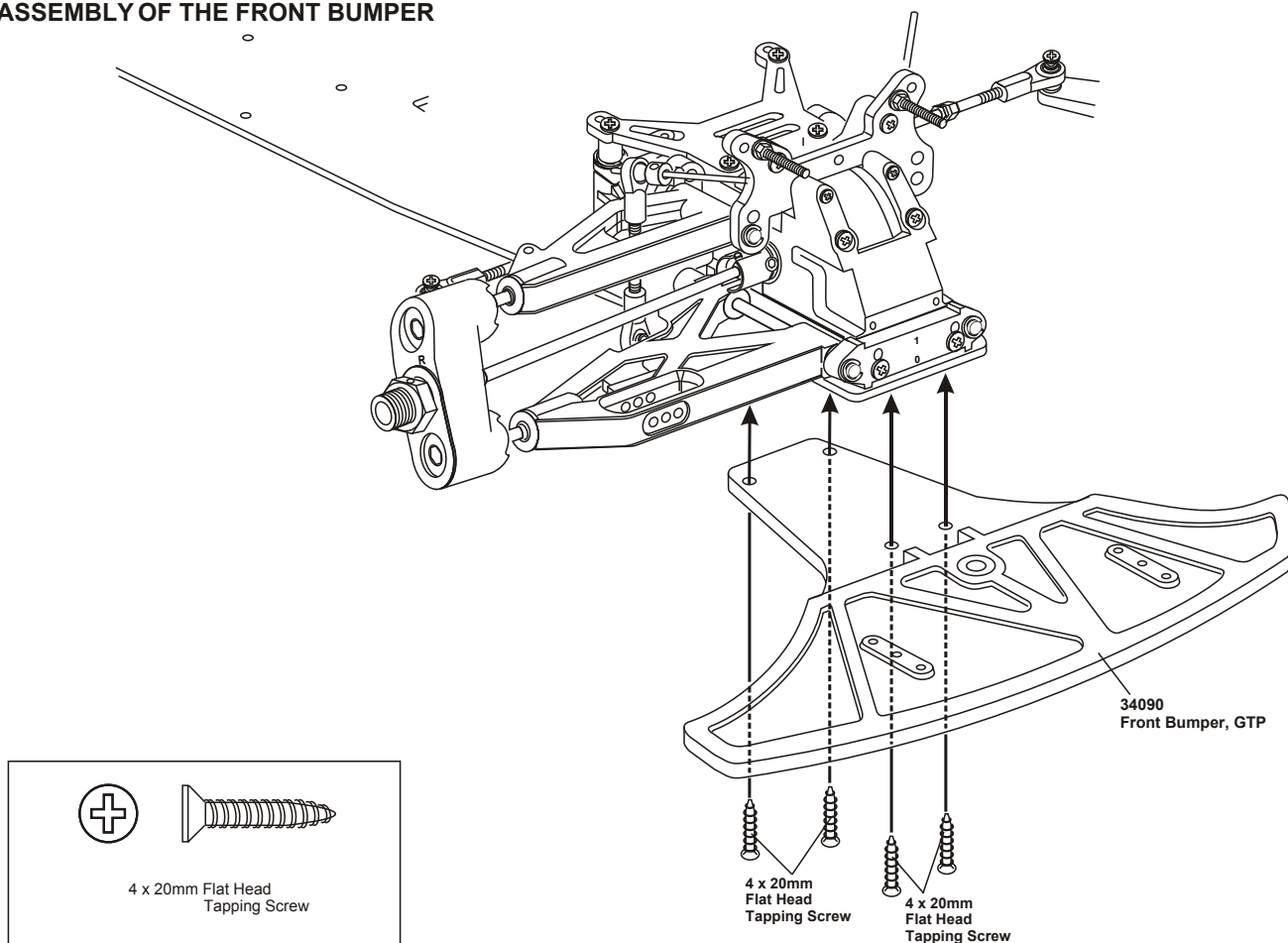




## ASSEMBLY OF THE FRONT GEAR BOX ONTO CHASSIS

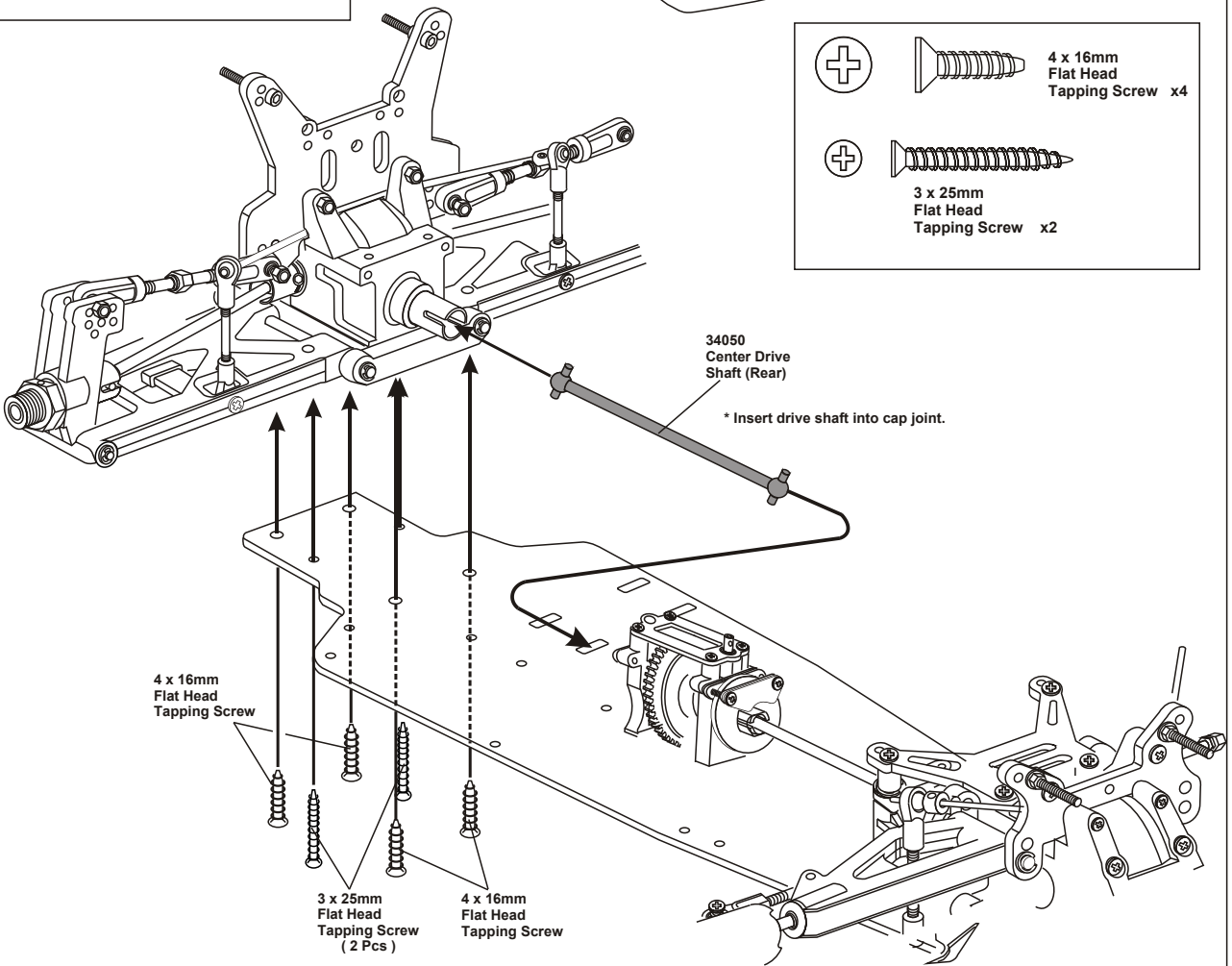
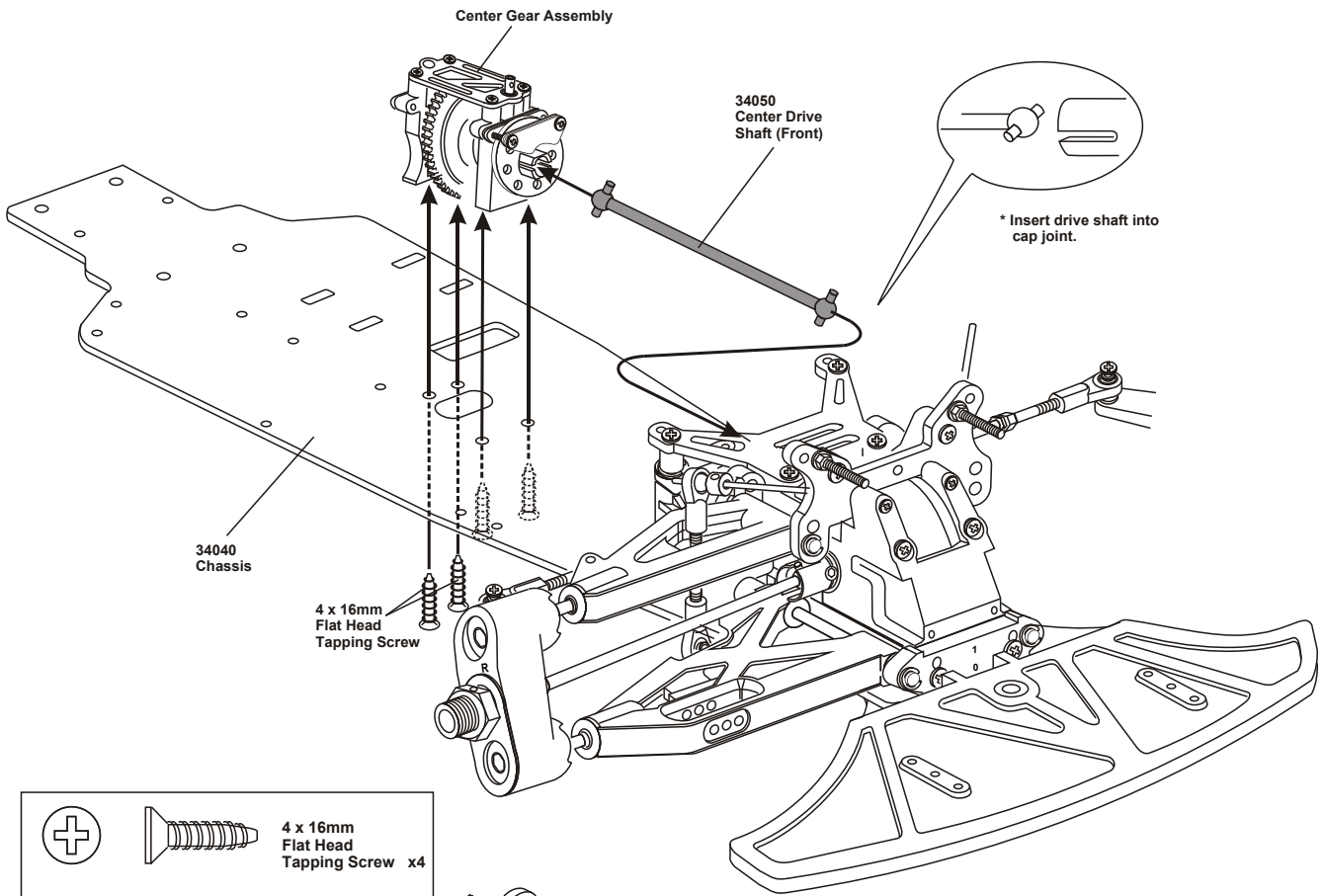


## ASSEMBLY OF THE FRONT BUMPER



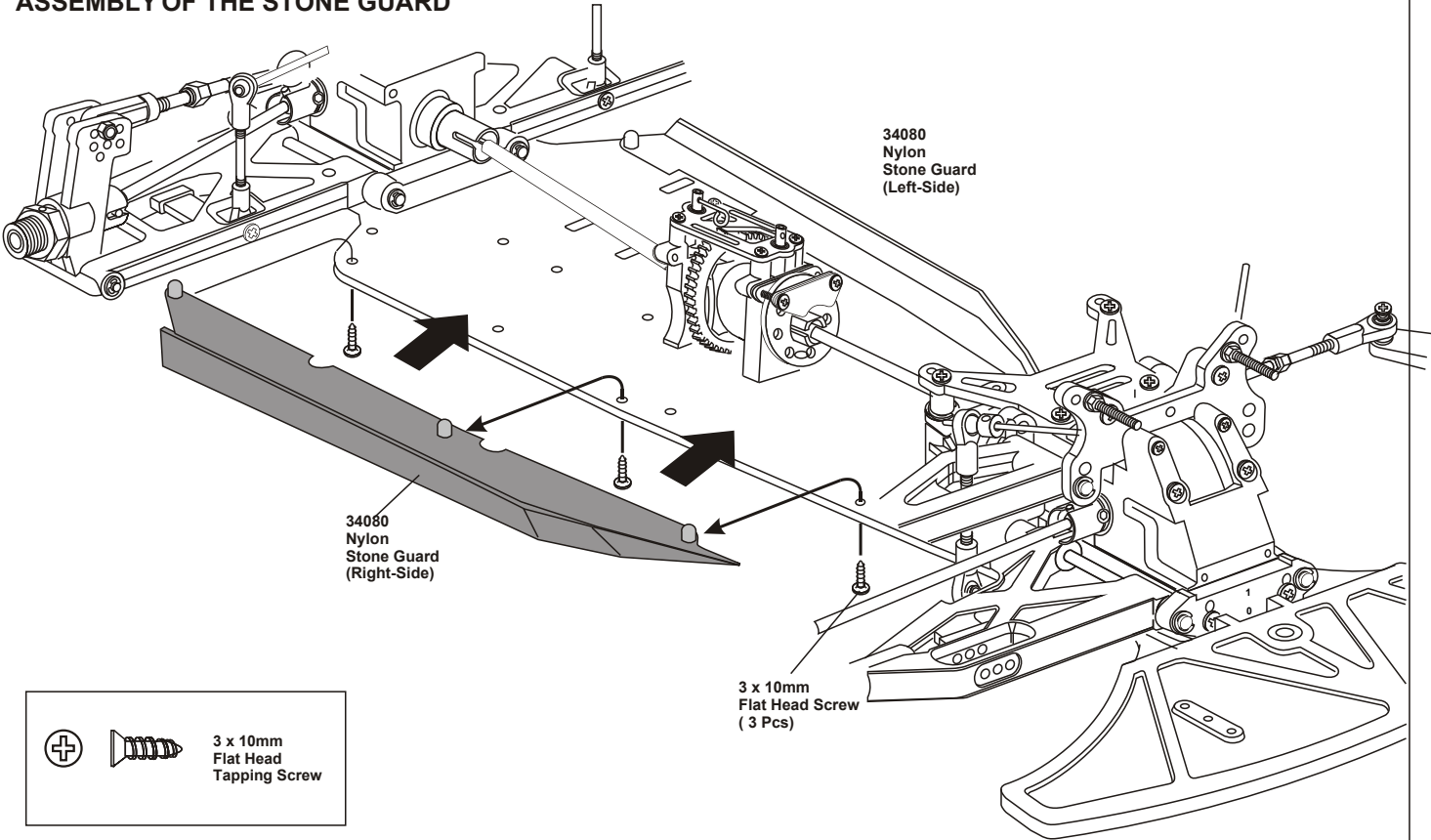


ASSEMBLY OF THE CENTER DRIVE SHAFT





**ASSEMBLY OF THE STONE GUARD**





## ASSEMBLY OF THE CLUTCH INTO ENGINE



3 x 5mm Screw



3 X 8mm Washer



3 x 20mm Cap Screw



3mm Nylon Locknut

### Notes:

Non-Pull Start Engines...

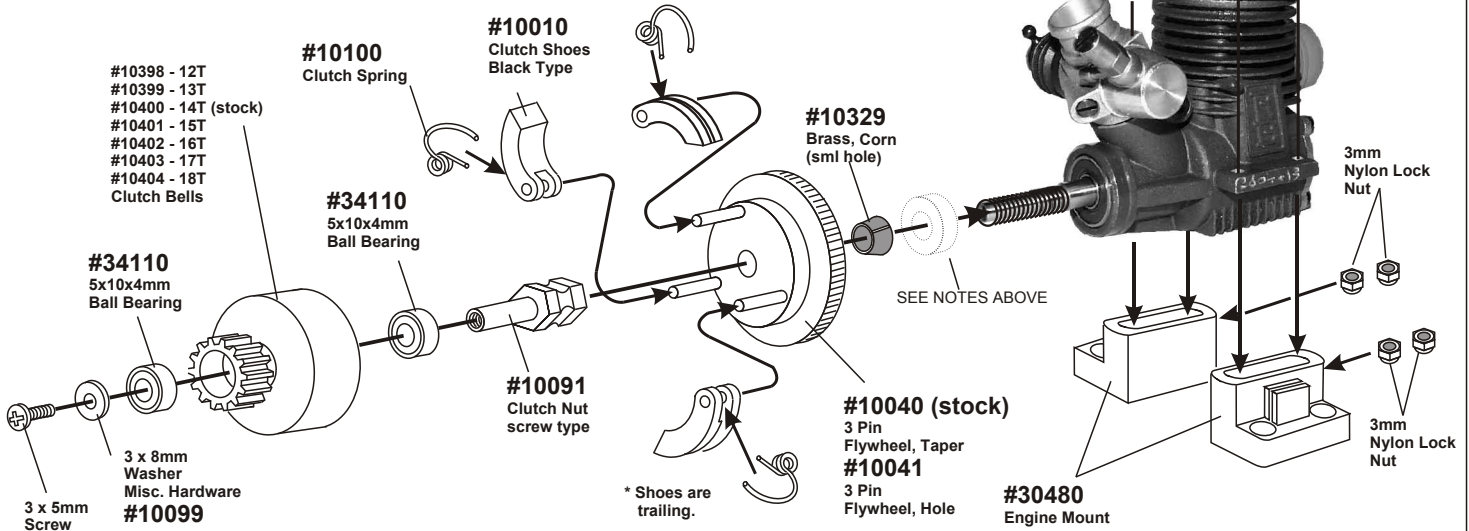
• Alum. Washer behind the flywheel is not needed when using Force engines or similar types. O.S. Engines will require washer spacer.

• To check!..place the brass corn against the engine bearing, then flywheel. You should be covering one or two thread of the engine shaft. If this is the case, you do not need an additional washer behind the flywheel.

You must cut the engine shaft if too long. Count 6 threads in front of the flywheel and mark. This is all you need to tighten the clutch nut and mount the flywheel.

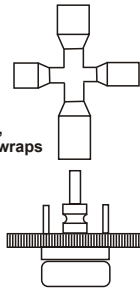
Force Pull Start Engine...

• Force Pull Start Engines required NO spacer and no shaft cutting. The engines comes with an alum cast driver washer, you use this part as the spacer, not the alum. washer shown. Also, use the special flywheel brass corn. This corn fits the thread shaft diameter so you can tighten the flywheel against the drive hub.

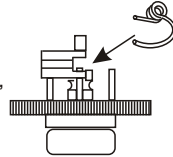


\* Fit the flywheel using a cross wrench or deep socket.

If engine turns when tightening, hold piston with large thick tie-wraps and hard wood in exhaust port. Do not use metal, it will damage engine.



\* Place the clutch shoes with the clutch springs over the 3 pins of the flywheel. Using a screw driver as a lever, bend the small end of the clutch spring behind the clutch nut and press down to snap shoe in place.



### #10098

SG Nut & Shim KIT



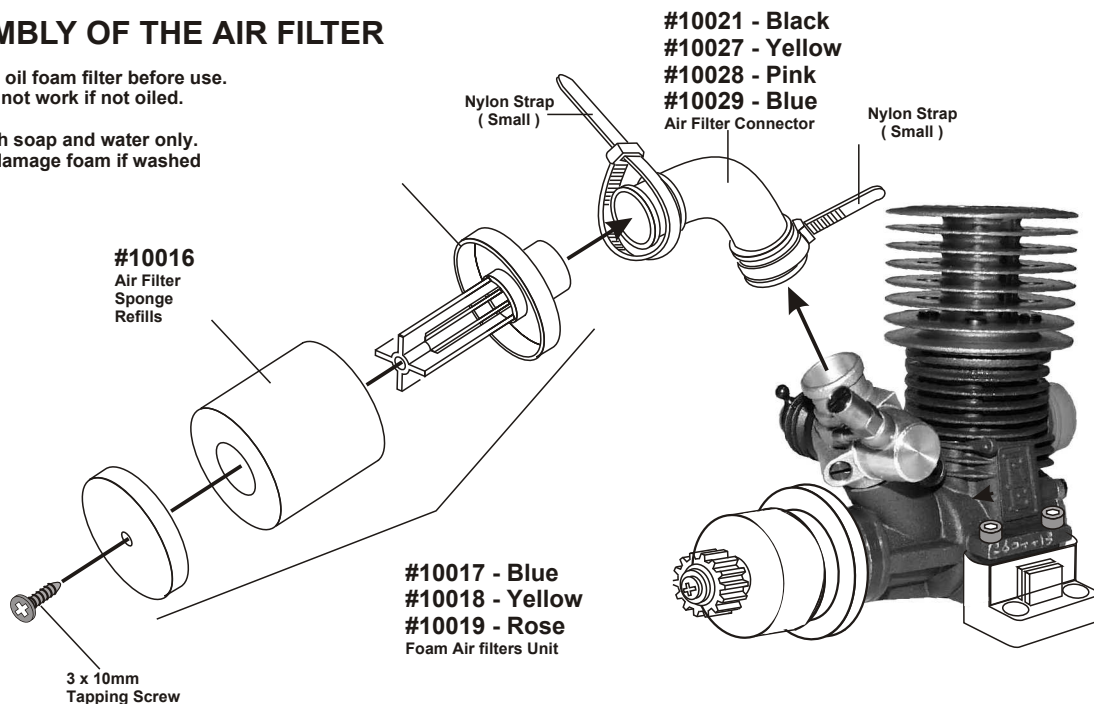
Engines with ground shafts and few threads are called SG Shaft. A special clutch nut is needed.

The stock flywheel (#10040) is fine.

## ASSEMBLY OF THE AIR FILTER

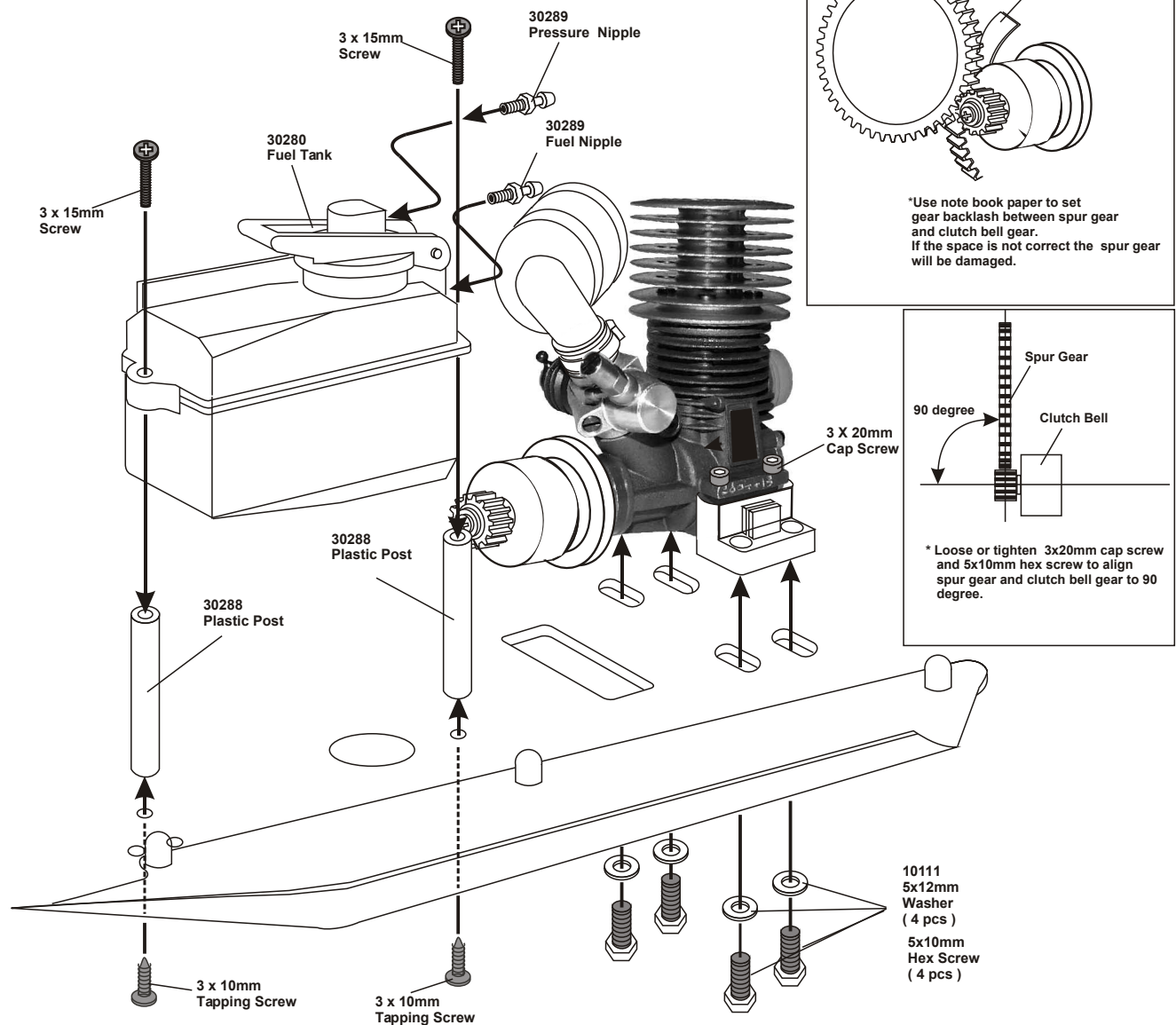
You must oil foam filter before use. Filter will not work if not oiled.

Clean with soap and water only. You will damage foam if washed if fuel!



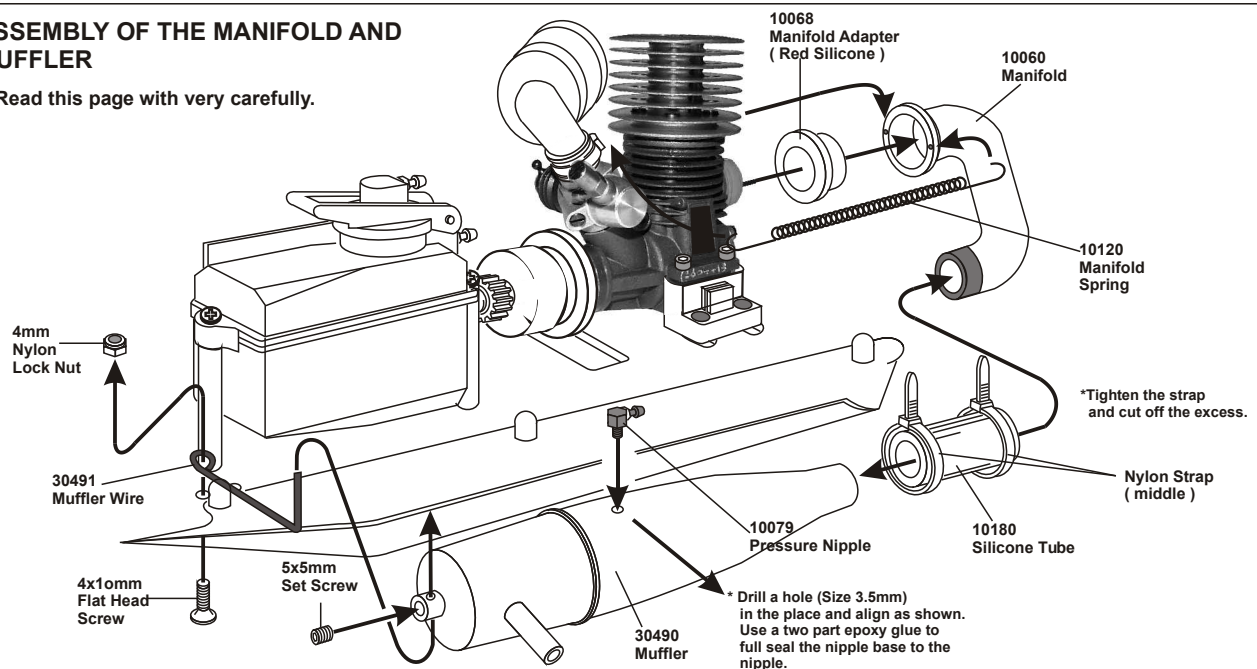


## INSTALLATION OF THE FUEL TANK AND ENGINE ONTO CHASSIS



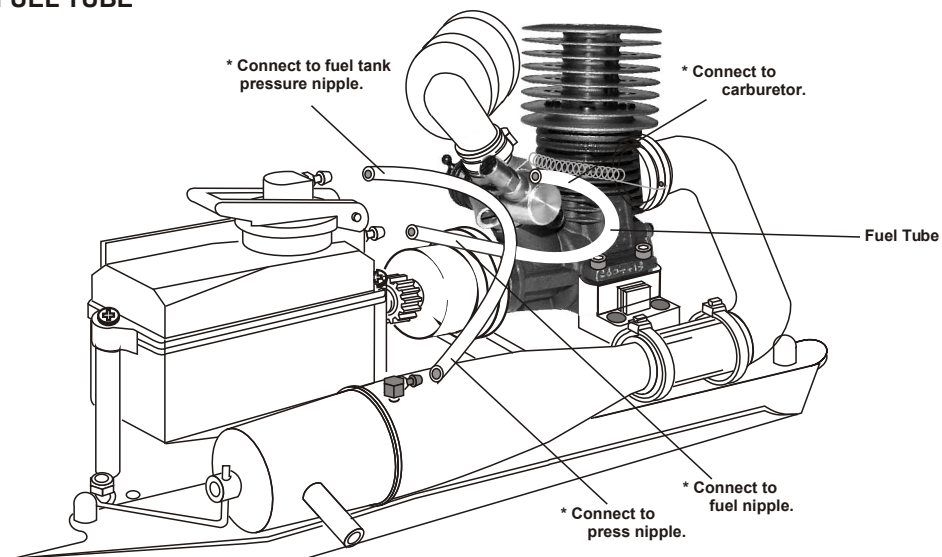
## ASSEMBLY OF THE MANIFOLD AND MUFFLER

**\* Read this page with very carefully.**

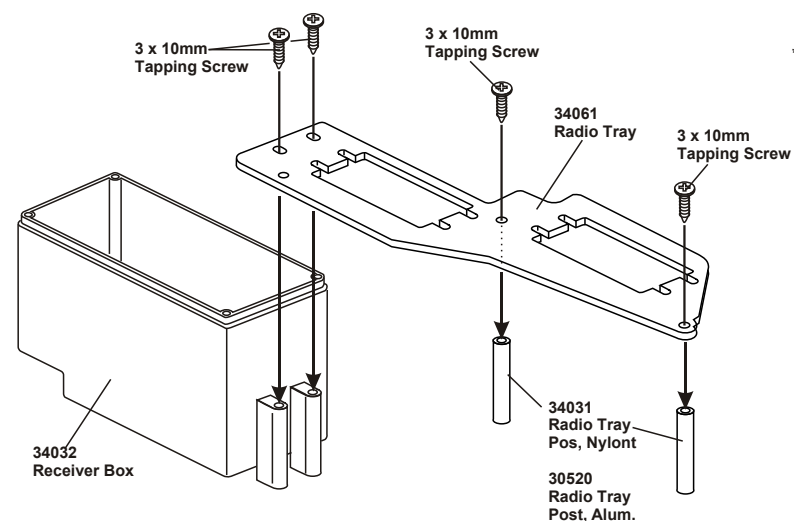




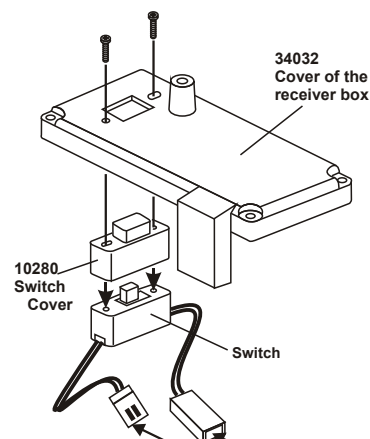
## ASSEMBLY OF THE FUEL TUBE



## ASSEMBLY OF THE RADIO TRAY AND SERVO

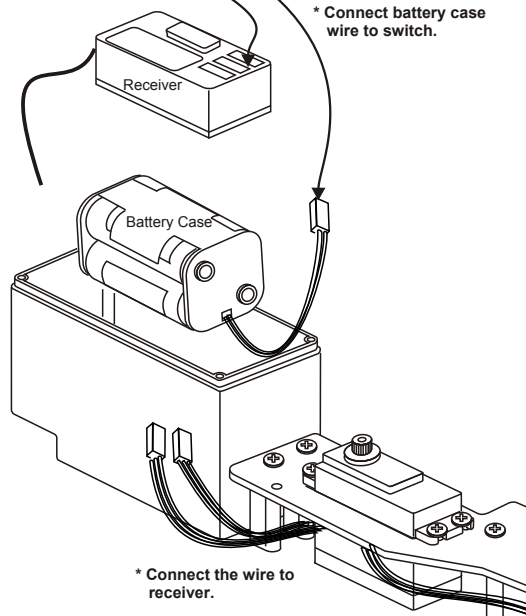
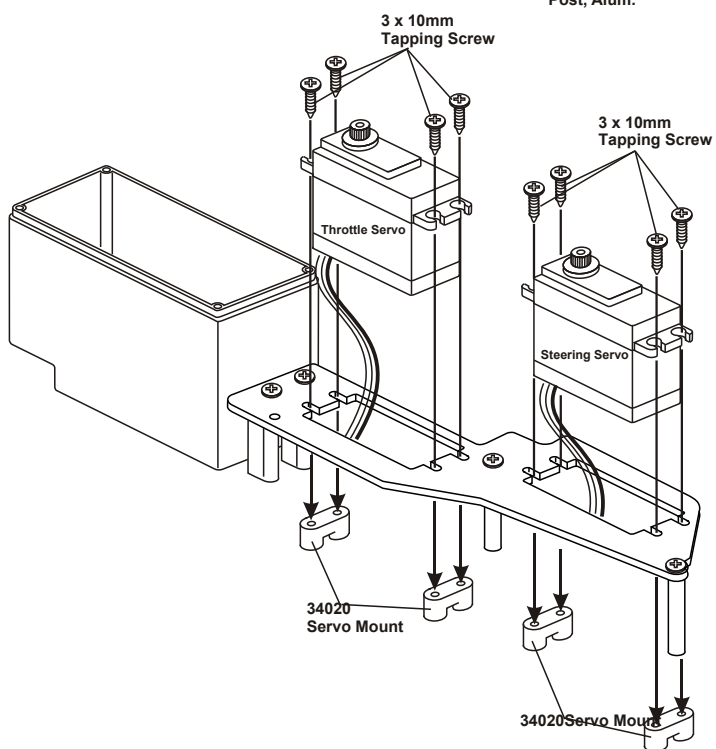


\* Use the screw provided with your witch.



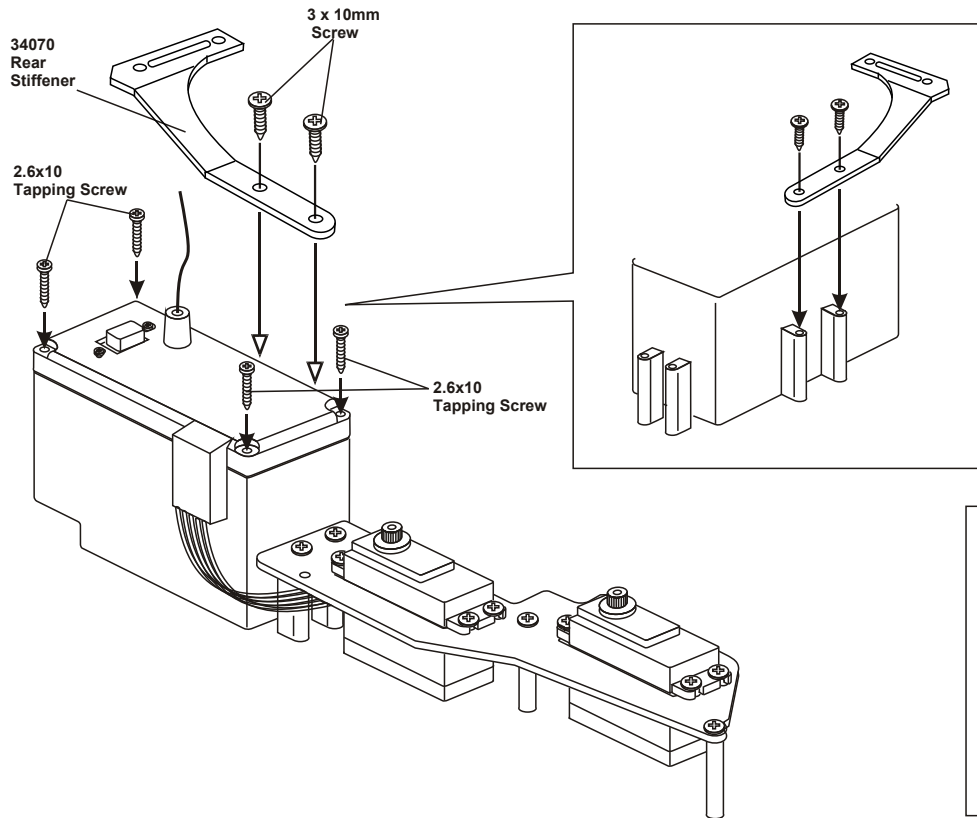
\* Connect switch wire to receiver.

\* Connect battery case wire to switch.



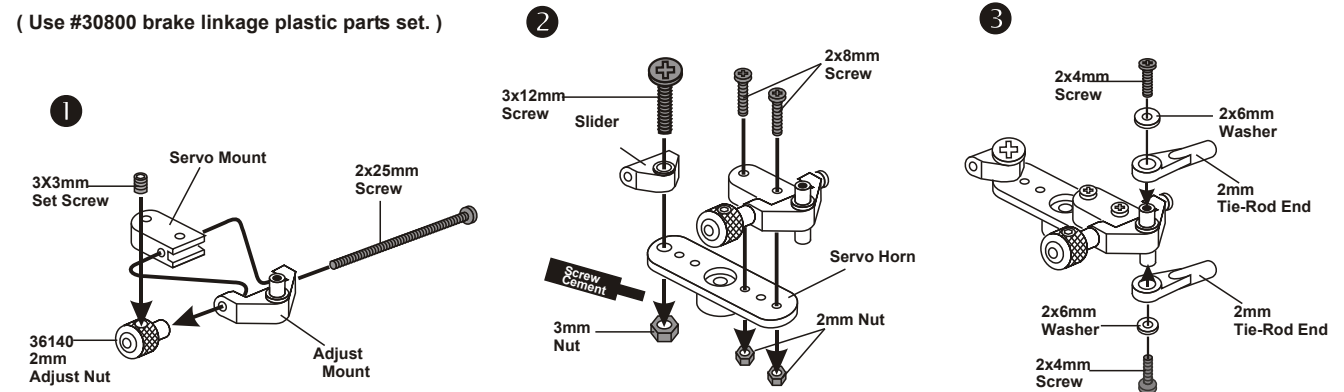


## ASSEMBLY OF THE REAR STIFFENER

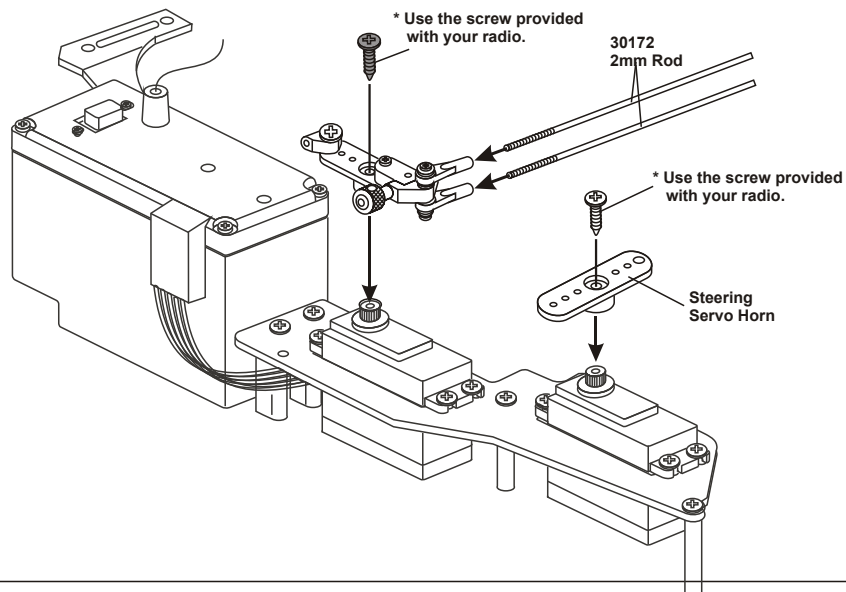


## ASSEMBLY OF THE BRAKE SYSTEM

( Use #30800 brake linkage plastic parts set. )



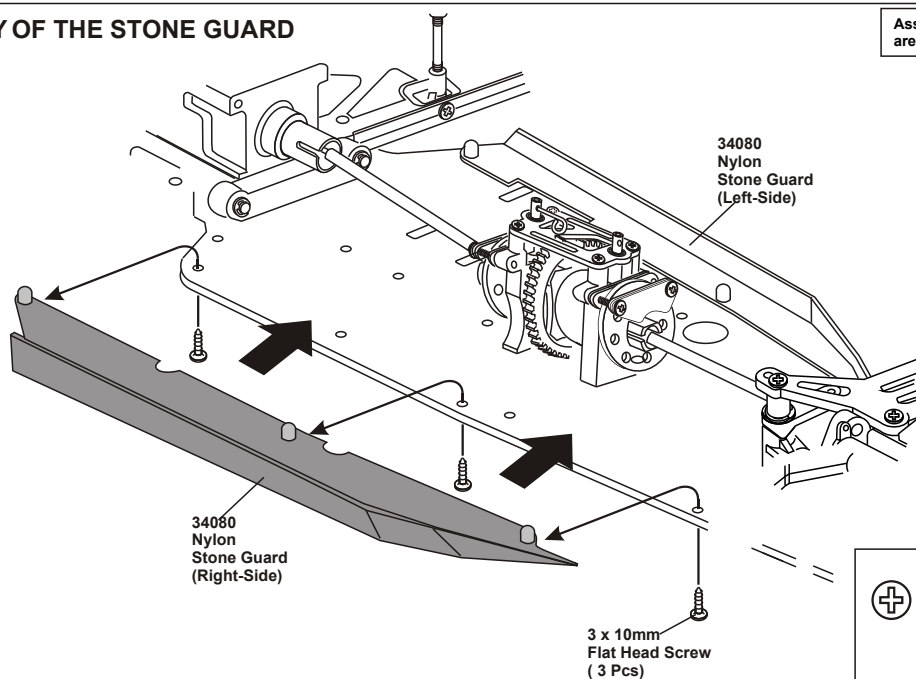
## ASSEMBLY OF THE SERVO HORN LINKAGE INTO SERVO





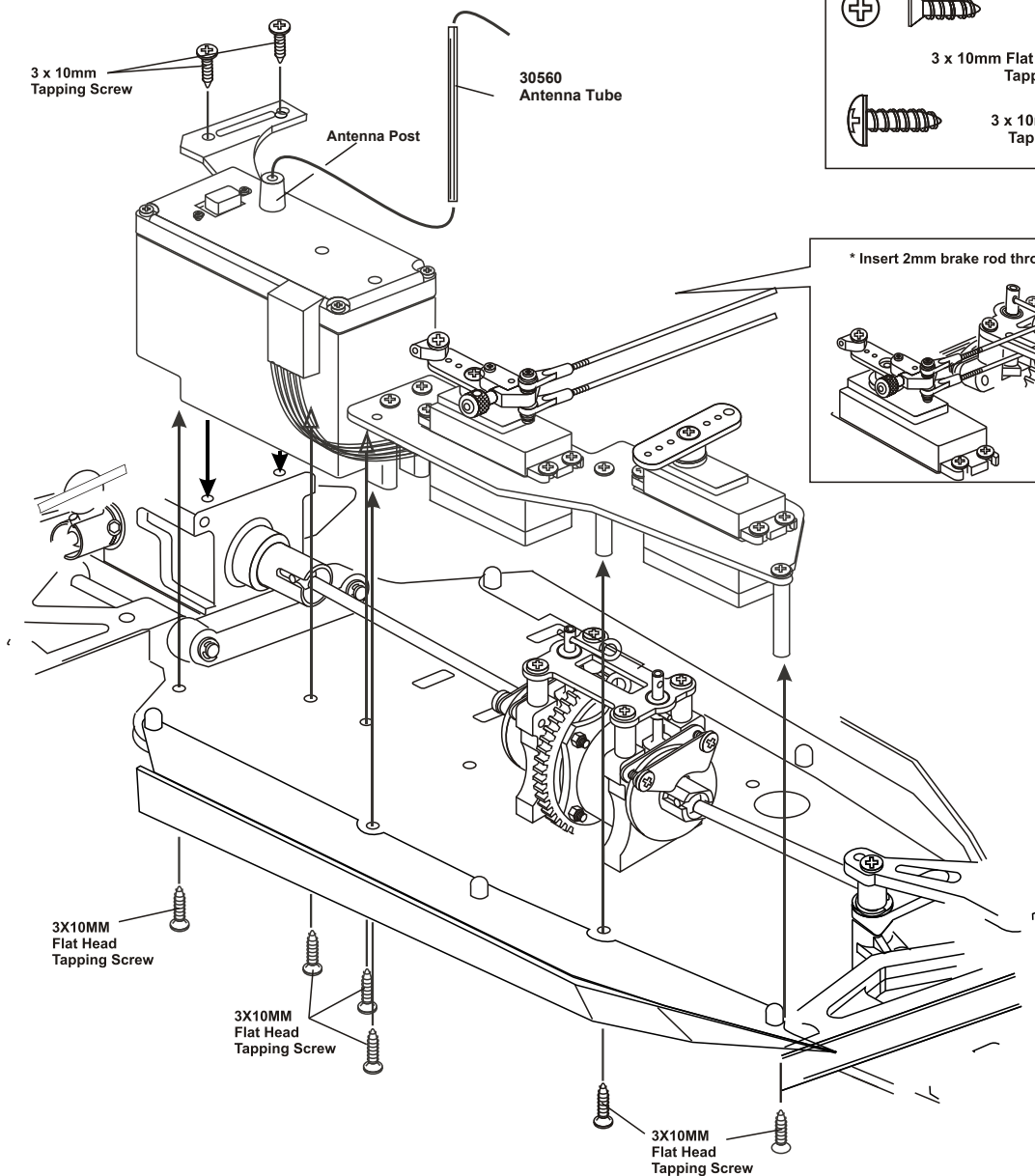
## ASSEMBLY OF THE STONE GUARD

Assembly of the right and left hand side are the same.



3 x 10mm Flat Head Tapping Screw

## ASSEMBLY OF THE RADIO TRAY ONTO CHASSIS

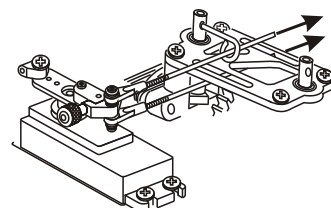


3 x 10mm Flat Head Tapping Screw



3 x 10mm Tapping Screw

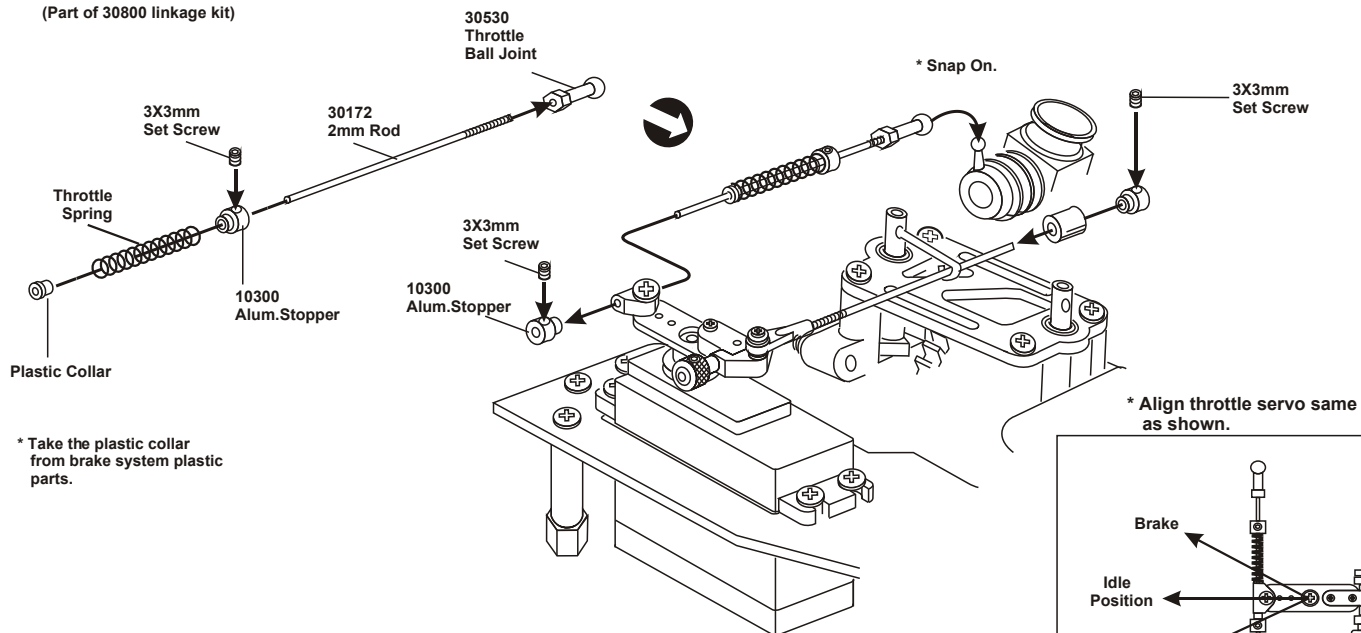
\* Insert 2mm brake rod through brake lever.





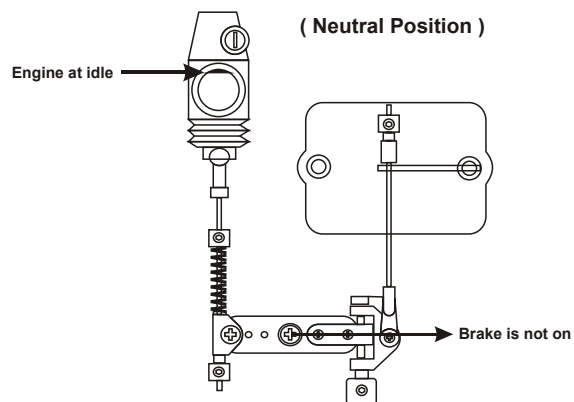
## ASSEMBLY OF THE THROTTLE LINKAGE SYSTEM

(Part of 30800 linkage kit)

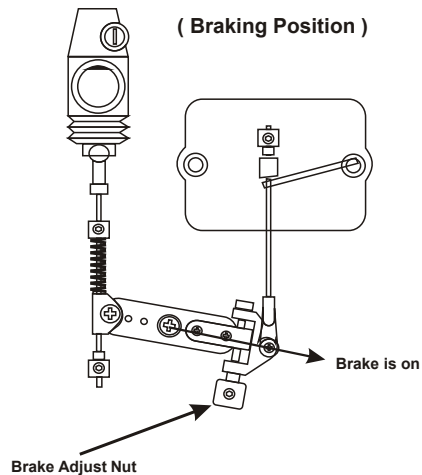


## ALIGN THROTTLE SERVO AND BRAKE SAME AS SHOWN

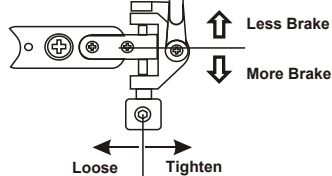
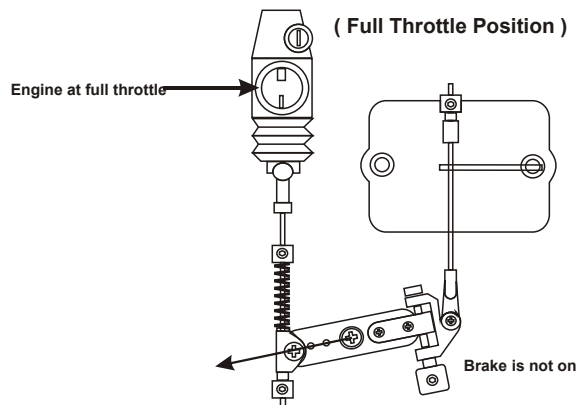
①



②



③



\* Tighten or loose the adjuster nut will change the brake.



## ASSEMBLY OF THE FRONT STEERING ROD

30411  
6mm  
Ball & Socket

30402  
3 X 30mm  
Tie Rod

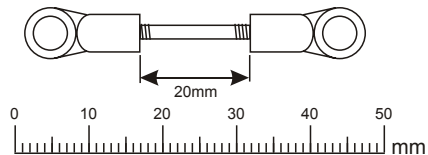
30410  
6mm Ball End

30411  
6mm  
Ball & Socket

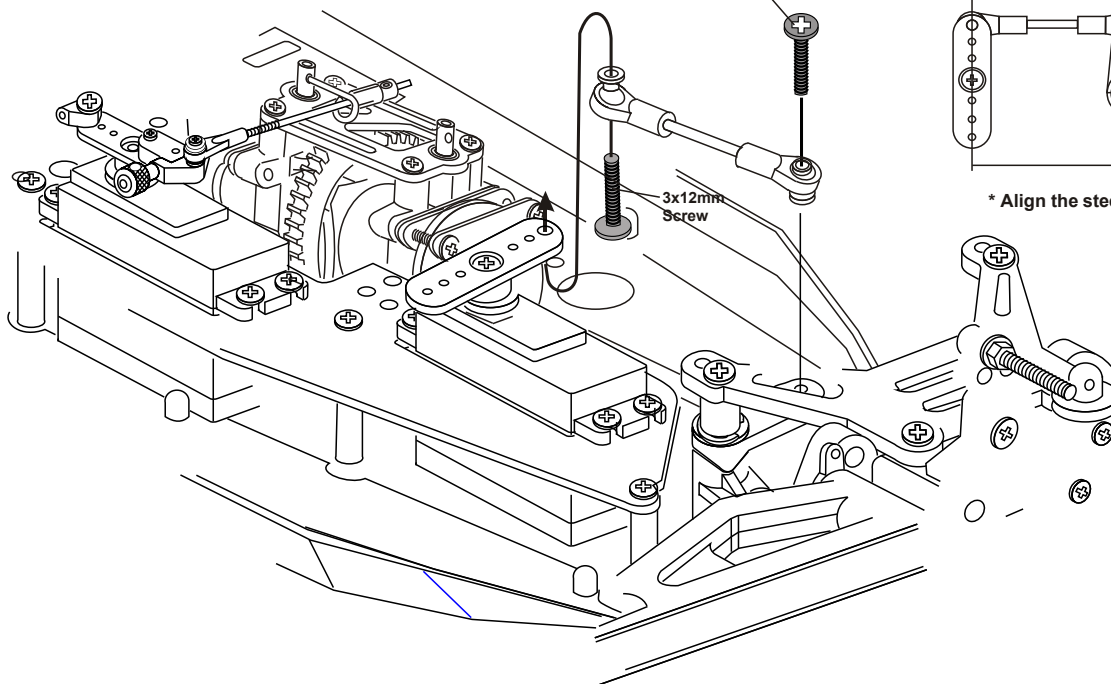
30410  
6mm Ball End

3x12mm  
Screw

3x12mm  
Screw



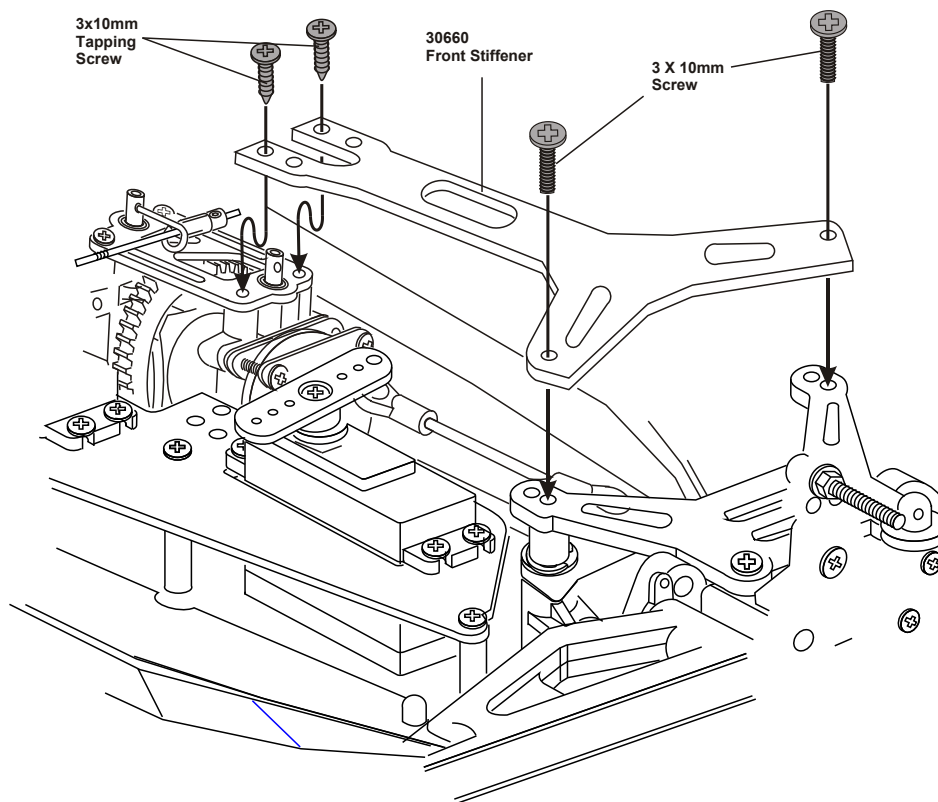
\* Align the steering servo as shown.



3x10mm  
Tapping  
Screw

30660  
Front Stiffener

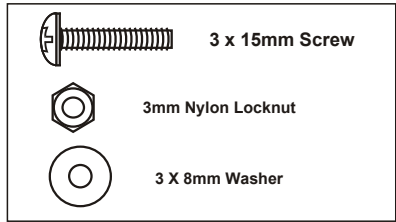
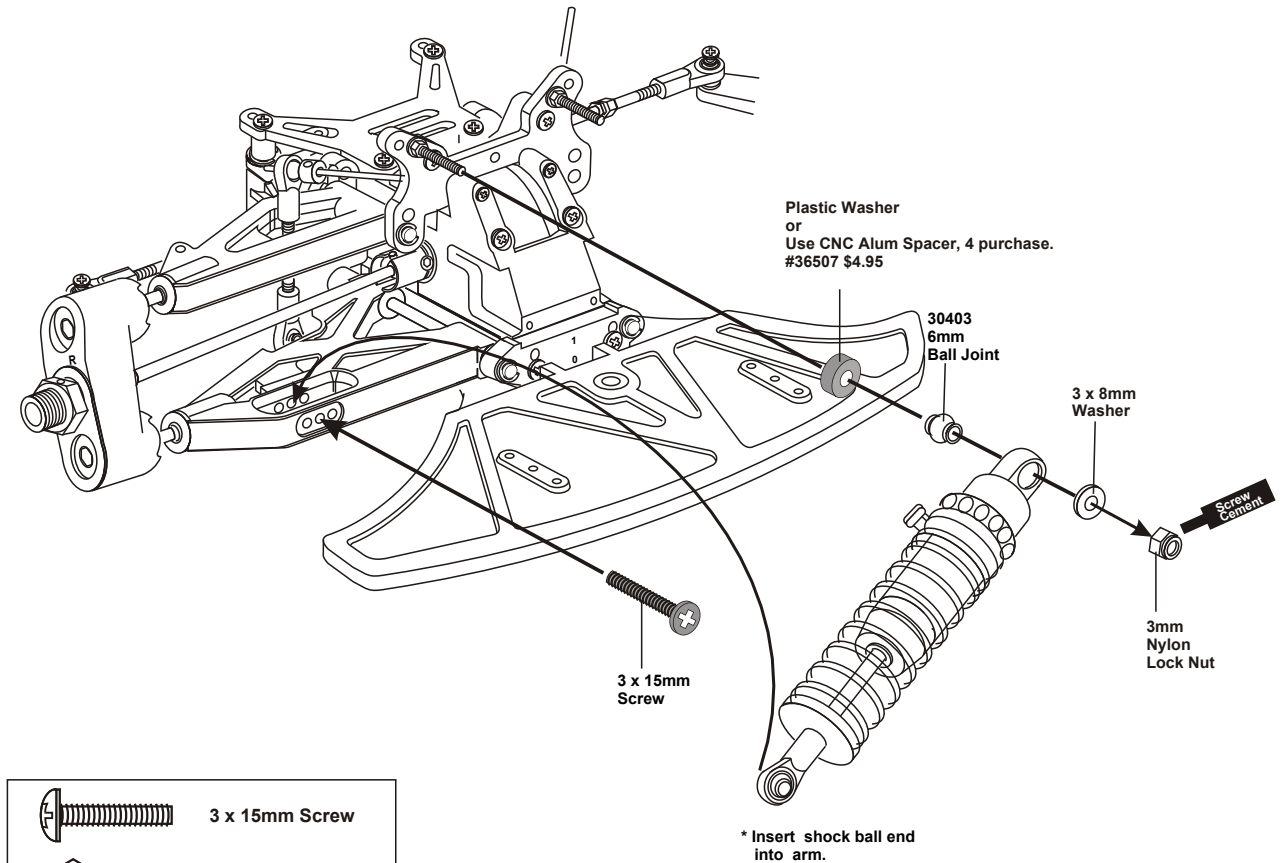
3 X 10mm  
Screw



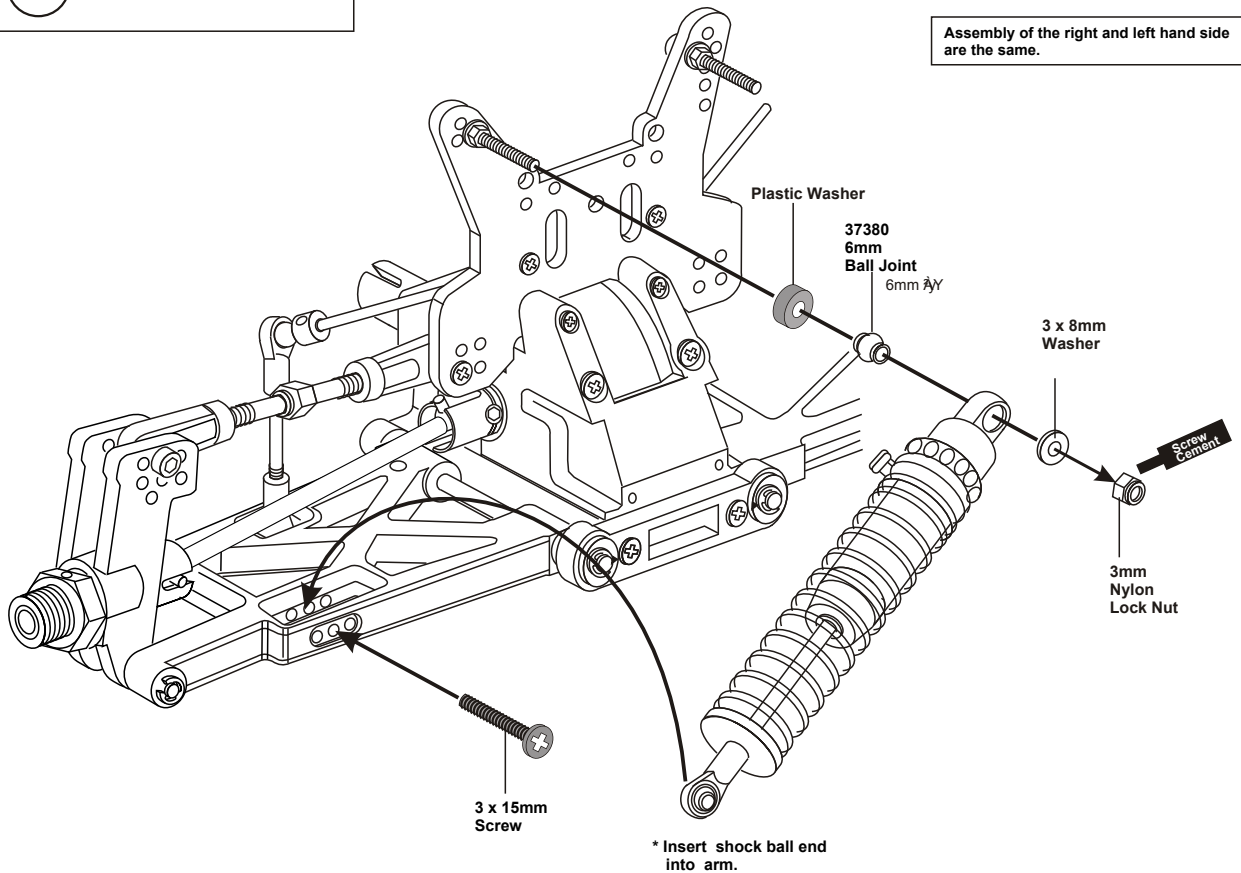


**ASSEMBLY OF THE FRONT AND REAR SHOCKS  
ONTO THE SHOCK TOWER**

Assembly of the right and left hand side  
are the same.



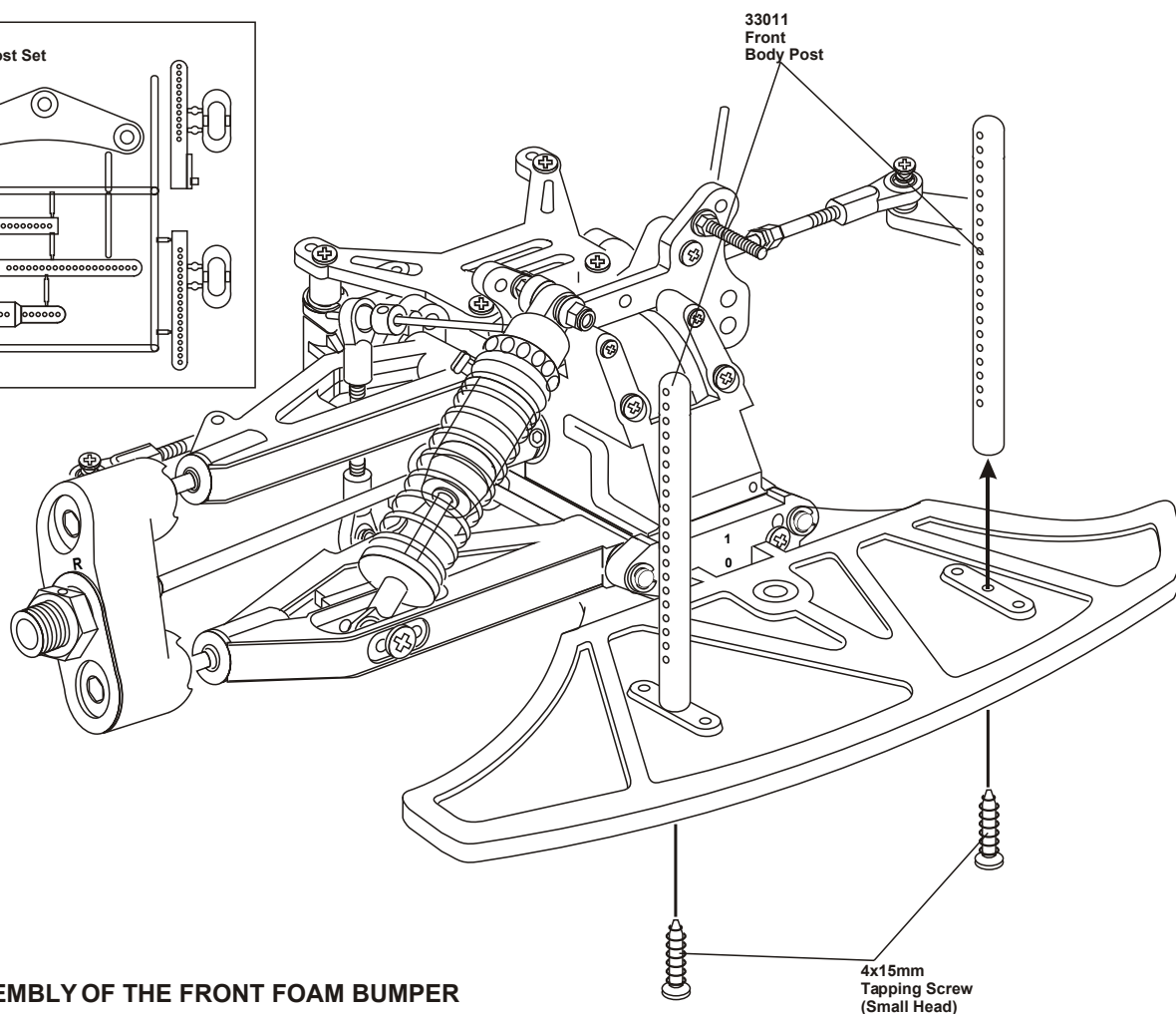
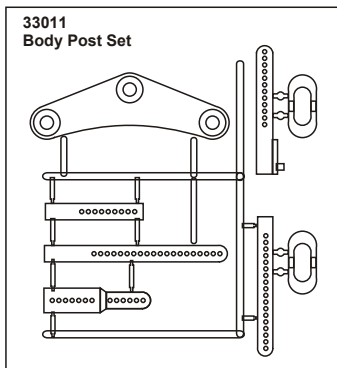
Assembly of the right and left hand side  
are the same.



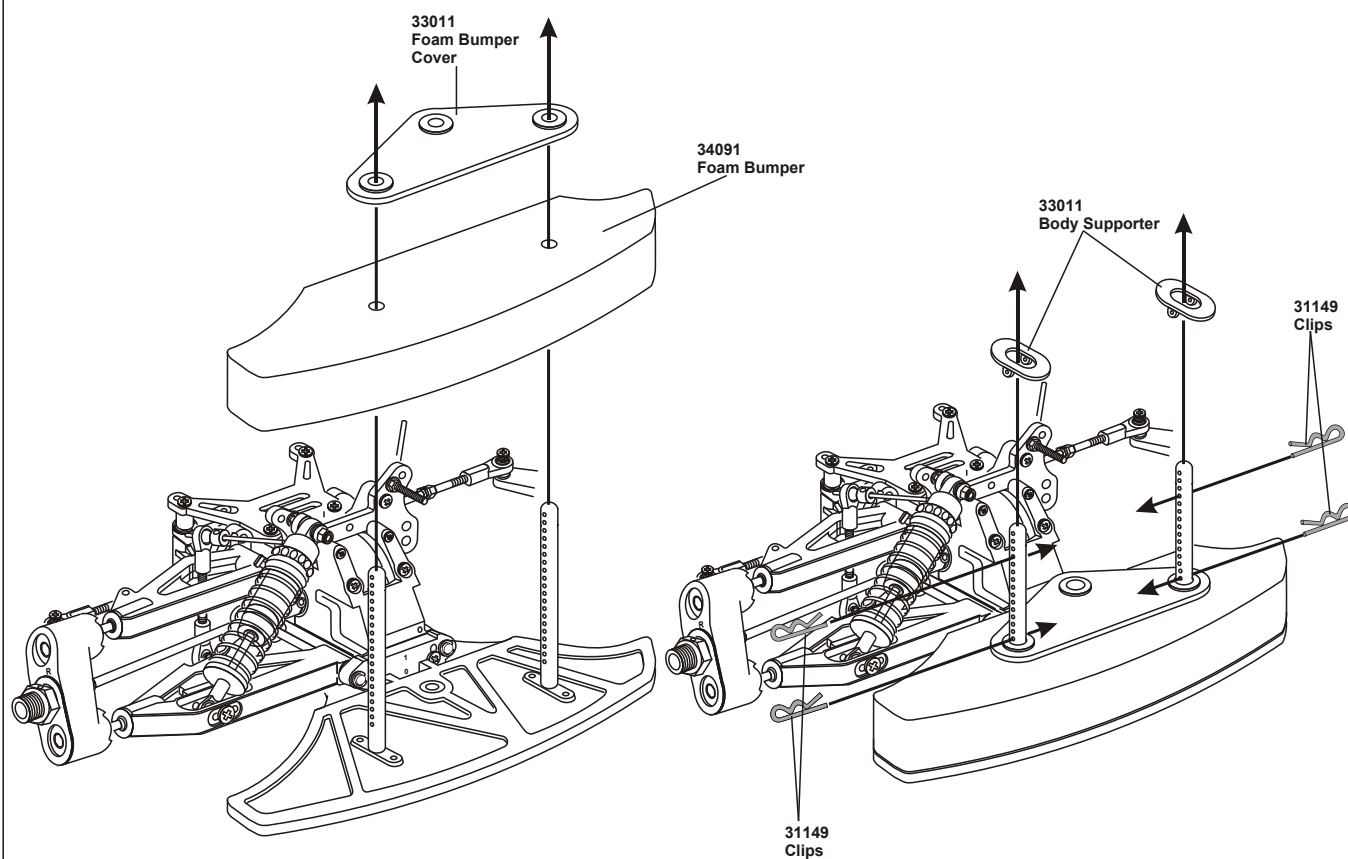


## ASSEMBLY OF THE FRONT BODY POST

33011  
Body Post Set

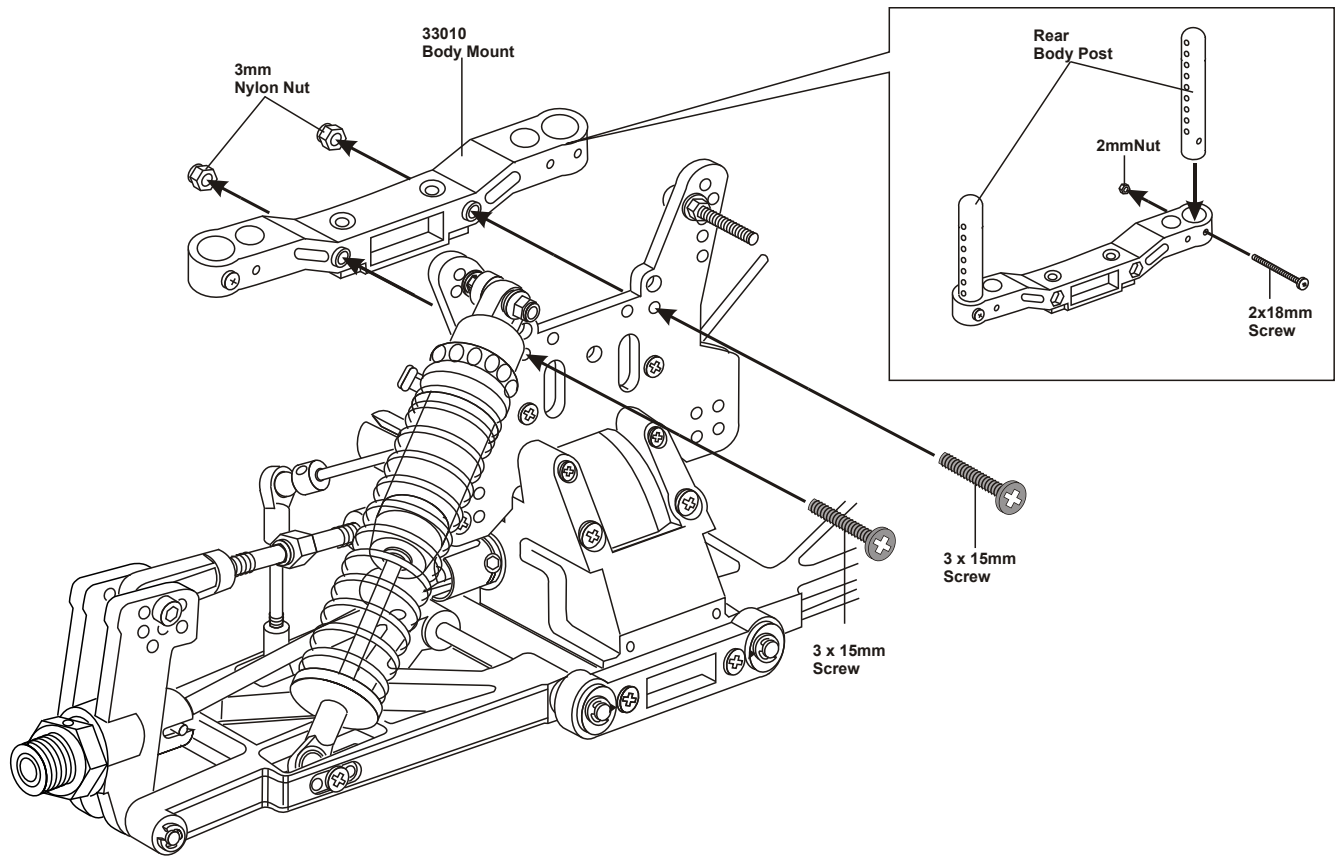


## ASSEMBLY OF THE FRONT FOAM BUMPER

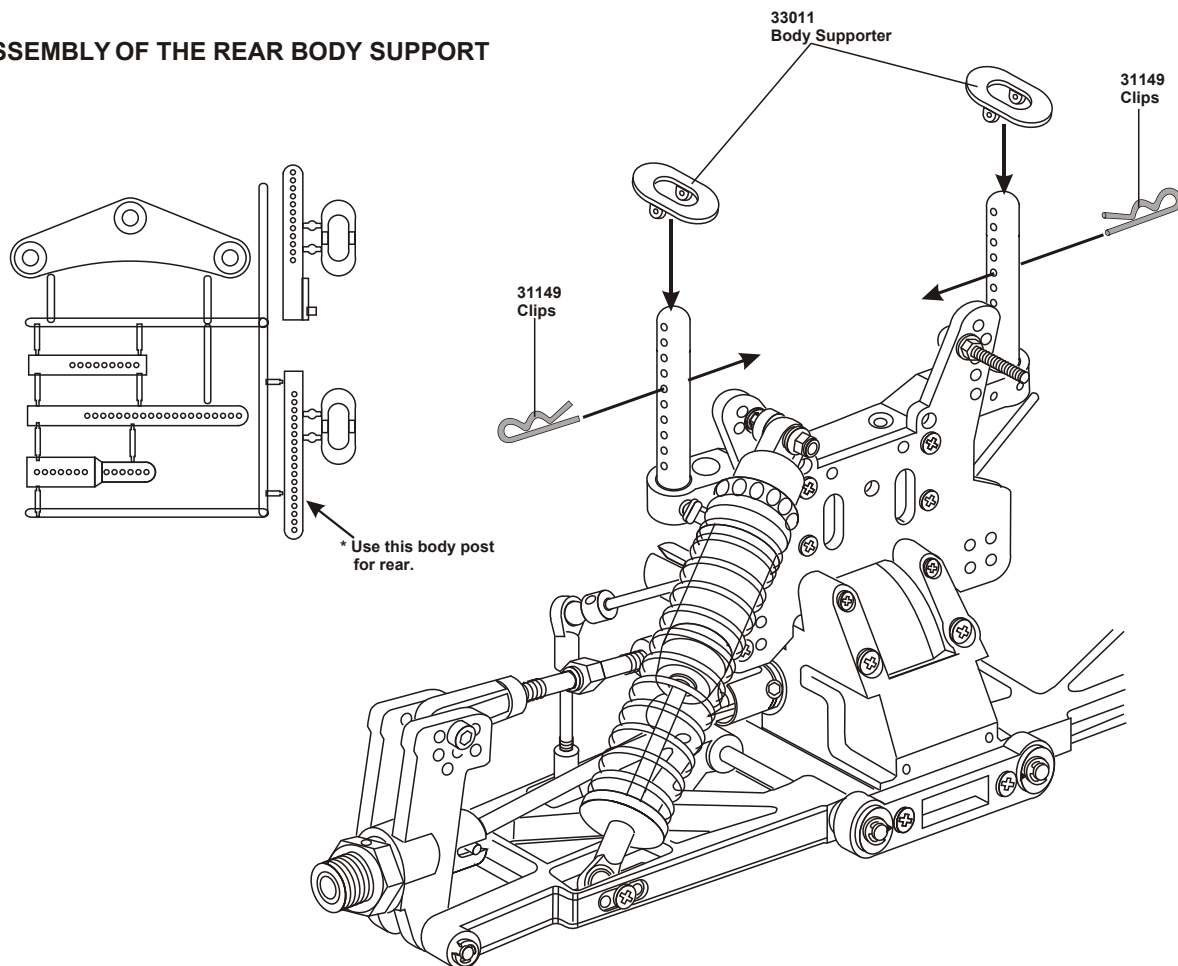




## ASSEMBLY OF THE REAR BODY MOUNT



## ASSEMBLY OF THE REAR BODY SUPPORT





## ASSEMBLY OF THE TIRES AND WHEELS

86059  
Inner Sponge  
(Small)

\* Take off  
double side tape.

86049  
Chrome Wheel

**#86044 - Red**  
**#86045 - White**  
**#86046 - Lime**  
**#86047 - Yellow**  
**#86048 - Black**  
**#86049 - Chrome**  
17mm 5-Star Wheels,  
Two (2) Pairs per bag.

\* Put the sponge on the middle  
of the wheel.

86059  
Inner Sponge  
(Large)

\* Use foam cement  
to glue together.  
Not CA Glue.

\* The tires might be different  
as picture shown.

86050  
Slick Tires

**#86050 - Slick Tire, No-belt**  
**#86051 - Slick Tire, Belted**  
**#86052 - Treaded Tire, No-belt**  
**#86053 - Treaded Tire, Belted**

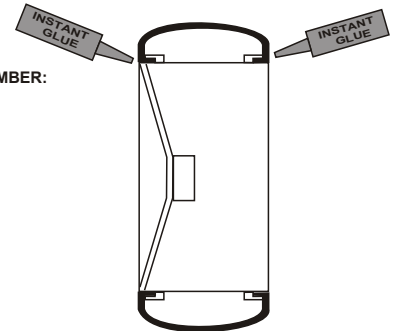
**#86504 - Pre-glued Set, Slick/White**  
**#86505 - Pre-glued Set, Tread/White**  
**#86508 - Pre-glued Set, Slick/Chrome**  
Using 17mm 5-Star Spoke Wheels, pairs

\*Put the tire into  
the groove of the  
wheel.

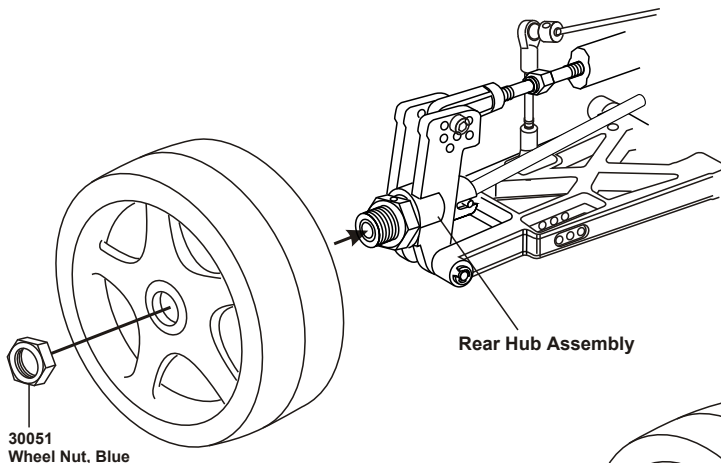
\* Apply instant glue into  
the groove of the wheel.

WE RECOMMEND CA GLUE  
FOR RUBBER TIRES. OFNA NUMBER:  
# 10239 SPECIAL CA GLUE

\* Apply instant glue into  
the groove of the wheel.

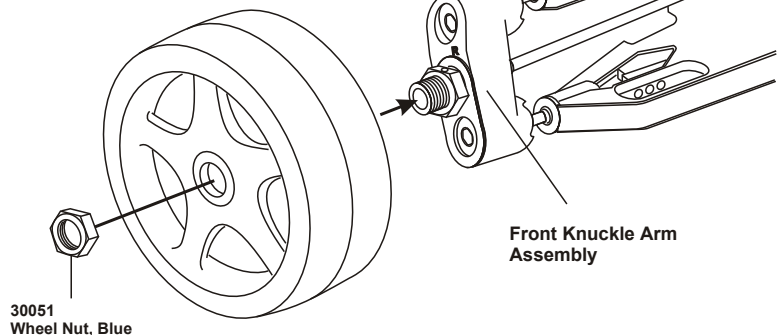


**YOUR KIT COMES WITH PRE-GLUED  
TIRES, BUT WHEN TIRES ARE WORN  
YOU MUST REPLACE THEM. MAKE TIRE  
AND WHEEL SET AS SHOWN**



Rear Hub Assembly

30051  
Wheel Nut, Blue



Front Knuckle Arm  
Assembly

30051  
Wheel Nut, Blue



# 1:8 WHEELS



Wheels, Hyper  
White  
Part #81051

Wheels, Hyper  
Gray  
Part #81052

Wheels, Hyper  
Yellow  
Part #81054



Wheels, 8 Spoke  
White  
Part #81025

Wheels, 8 Spoke  
Chrome  
Part #81026

Wheels, Stock  
White  
Part #81015



Foam (Y-Dot)  
Trued 17mm  
Part #82031

Foam (G-Dot)  
Trued 17mm  
Part #82032

Foam (B-Dot)  
Trued 17mm  
Part #82033



Wheels, Dish  
White  
Part #86040

Wheels, Dish  
Yellow  
Part #86041

Wheels, Dish  
Black  
Part #86042



Wheels, Dual  
Spoke, Orange  
Part #86032

Wheels, Dual  
Spoke, Chrome  
Part #86033

Wheels, Dual  
Spoke, White  
Part #86034

Wheels, Dual  
Spoke, Yellow  
Part #86035

Wheels, Dual  
Spoke, Lime G.  
Part #86036

Wheels, Dual  
Spoke, L. Gray  
Part #86037

Wheels, Dual  
Spoke, D. Gray  
Part #86038

Wheels, Dual  
Spoke, Red  
Part #86039



Wheels, Star  
Red  
Part #86044

Wheels, Star  
White  
Part #86045

Wheels, Star  
Lime  
Part #86046

Wheels, Star  
Yellow  
Part #86047

Wheels, Star  
Black  
Part #86048

Wheels, Star  
Chrome  
Part #86048

Wheels, 17mm  
Monster, White  
Part #81165



[WWW.OFNA.COM](http://WWW.OFNA.COM)

22692 Granite Way #B Laguna Hills, CA 92653 Tel: 949.586.2910 Fax: 949.586.8812

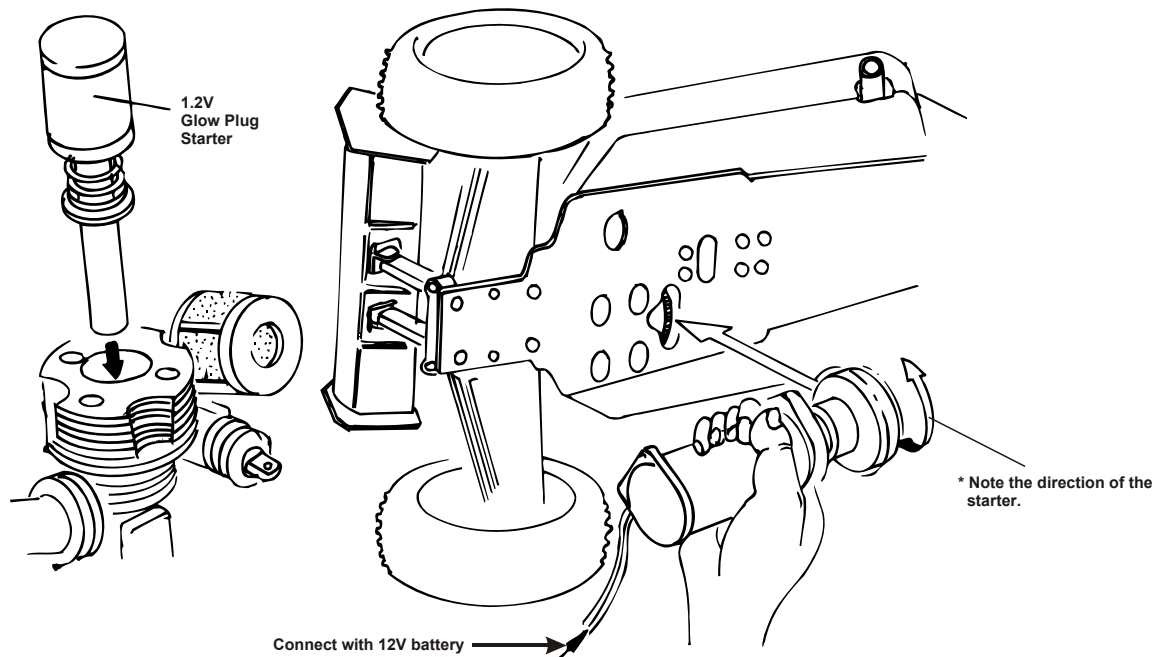


## STARTING OF THE ENGINE WITHOUT PULL START

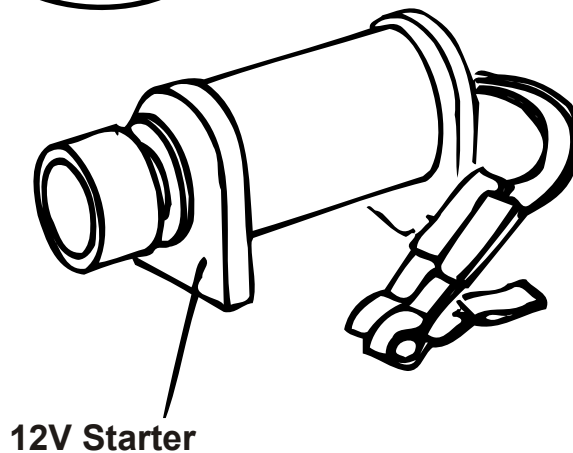
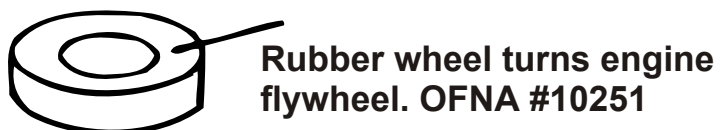
### How to start the engine:

1. Turn on transmitter and then receiver.
2. Fill fuel tank with fuel bottle.
3. Connect 1.2V glow plug starter.
4. Start engine with 12V starter or starter box  
(Note the direction of the starter.)
5. After the engine be started, remove the 1.2V glow plug starter.

\* Follow the engine manufacturer instruction manuals regarding engine set-up, carburetor and maintenance.



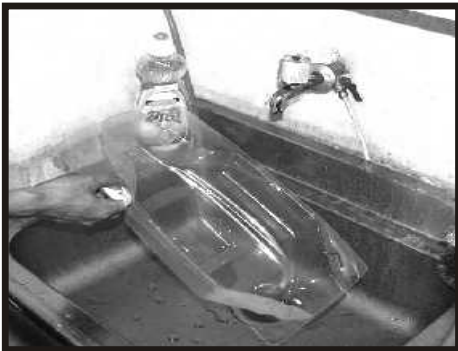
**\* To start the engine, use hand held starter motor or starter box.**





# PAINTING TIPS

For BUGGY



**STEP 1** Wash the inside of the body with detergent to remove any oil and dirt. Dry with lint free towel or a hair dryer. (Keep your hand clean.)



**STEP 2** Tools required are: Curved scissor, hobby knife and a quality masking tape. These can be purchased at your local hobby supplier.



**STEP 3** Use the curved scissors to trim the body to the guide lines provided on your body shell.



**STEP 4** Use masking tape on the inside of the body to mask out your design and windows prior to painting. Press down the edges!



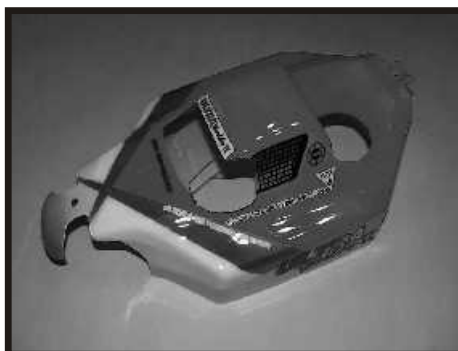
**STEP 5** Paint the inside of the body! Use a spray color suitable for polycarbonate. (Paint the darkest color first.)



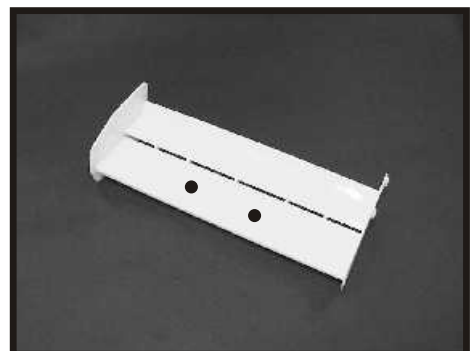
**STEP 6** Allow the paint to dry for at least an hour! Remove the masking tape and protection film from the outside of the body.



**STEP 7** Apply the decals to the outside of the body. We suggest use a hobby knife to cut them out.

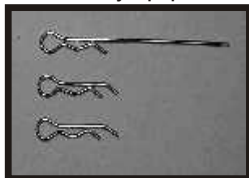


**STEP 8** Use a hobby knife to cut holes for the fuel tank, engine and antenna tube. Make two 7mm holes for the body posts; one at the front and one at the rear.



**STEP 9** Drill two 7mm holes in nylon wing. Using the measurements provided in the instruction. Use the clip provided to secure the wing to the wing mount posts.

**STEP 10** Mounting the body to the buggy using the body clips provided.

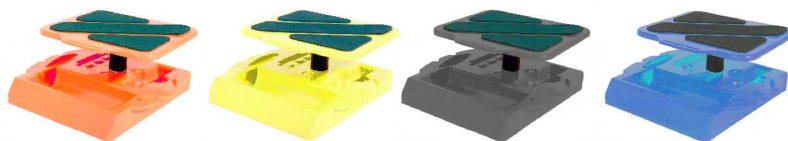




## ENGINE BREAK-IN AND TUNING

(BREAK-IN THE ENGINE BEFORE DRIVING THE CAR!)

- Choose a wide clear outdoor location with low dirt and dust.
- Set the car on box or holder with wheels off the ground.
- Turn on radio and car. Make sure throttle is at idle position.
- Fill fuel tank and set master engine needle.
- Prime fuel line and Heat glow plug before pull starting engine.
- When started, let engine fast idle for two tanks of fuel.



OPTIONAL OFNA CAR STANDS



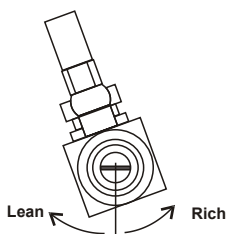
WOOD BLOCK

## TUNING AFTER BREAK-IN

Close master needle by turning clockwise until it stops. Then open needle by turning counterclockwise 3 turns (rich setting).



Adjust low end needle for best throttle response. Use only small turns. From idle, give it full throttle, if throttle is slow lean out needle until good.



When running car, adjust carb with 1/8 clockwise turns, slowly leaner, until the top speed good. Check engine temp, if possible, for no more 250 degrees.

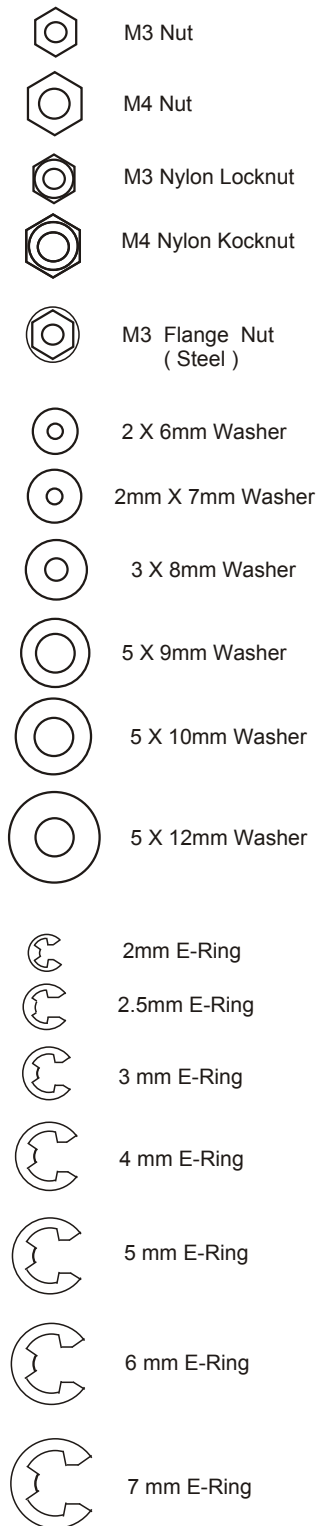
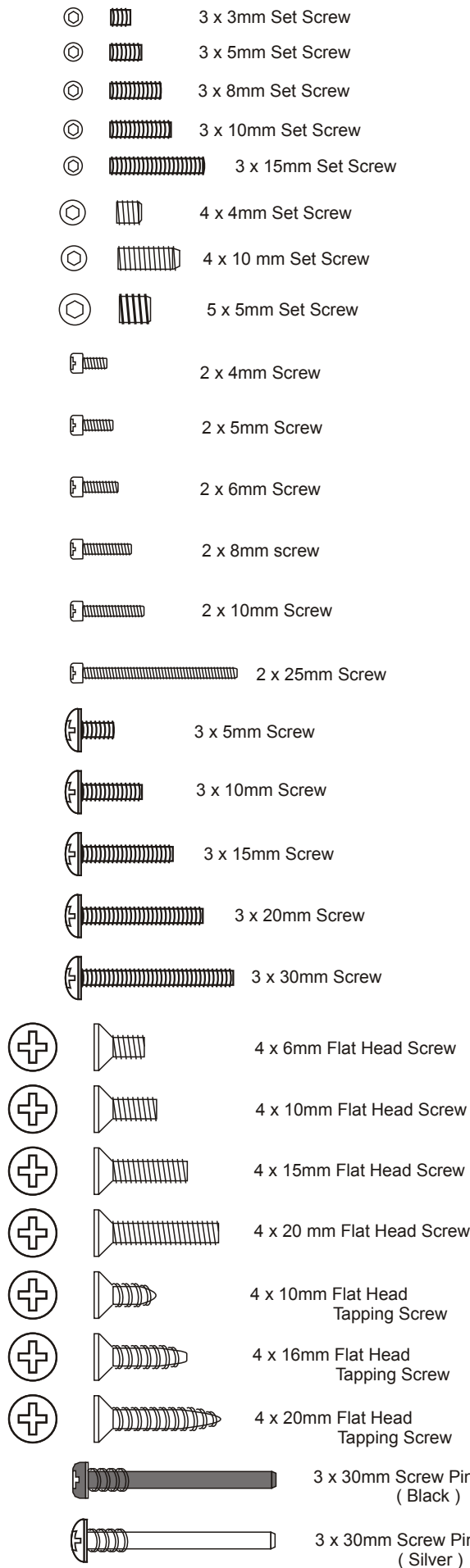
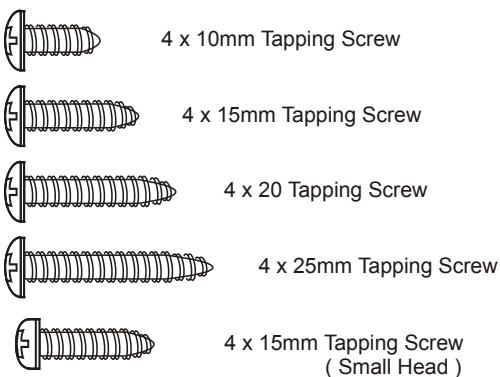
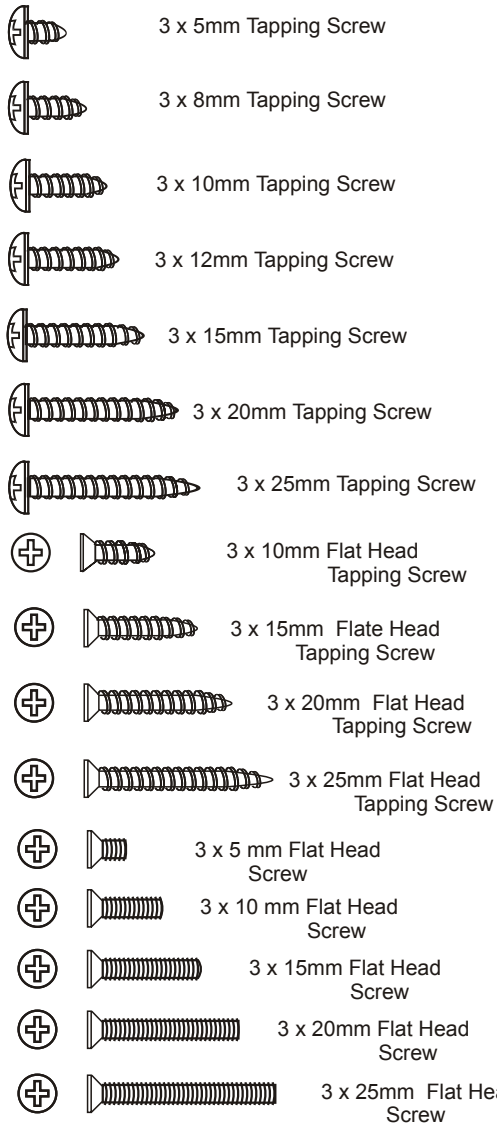
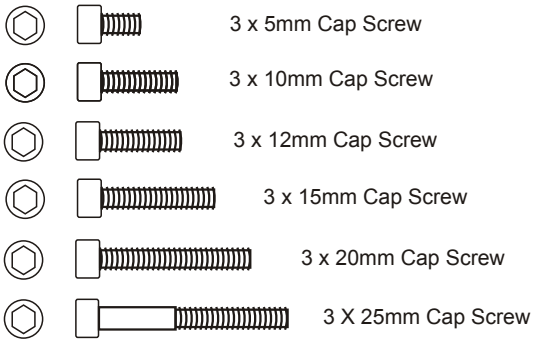
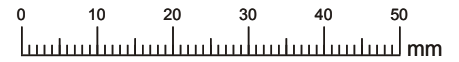


Adjust barrel stop so it will not close, accept for a small gap. This gap will be the idle setting. You will notice the idle will increase with a wide gap.





# 1:1 SCREW SHEET





# OPERATING YOUR MODEL SAFELY

## Before Running

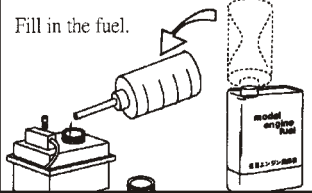
Your radio control model can move at high speed and therefore can cause injury to people or damage to property. It is your responsibility to operate your model safely.

For radio equipment, refer to the manual included with the radio.

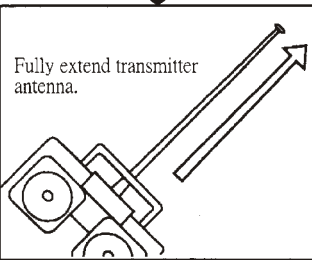
Check that all screws and nuts are tight.

If the model begins to operate by itself, there is someone else on your frequency. Do not try to operate your model under these conditions for it may go out of control.

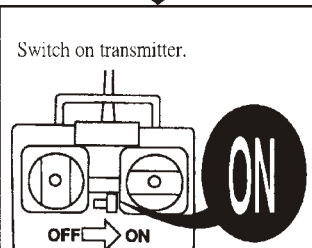
Fill in the fuel.



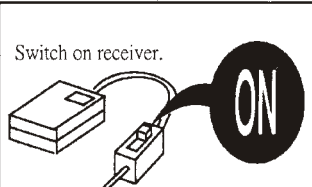
Fully extend transmitter antenna.



Switch on transmitter.

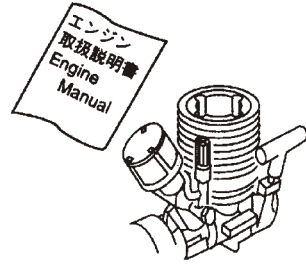


Switch on receiver.

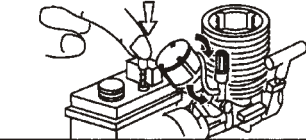


## Enging Start-up

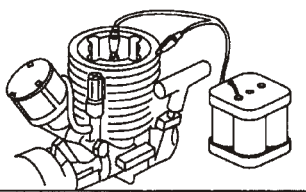
For engine use, refer to the manual included with the engine.



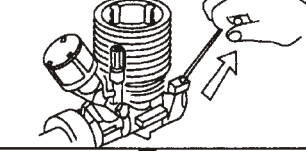
To prime the engine with fuel, press down the primer button.



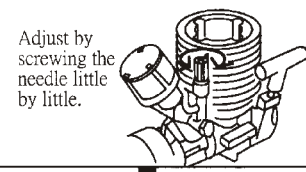
Attach one clip to the glow plug's end and the other clip to one of the cylinder cooling fins.



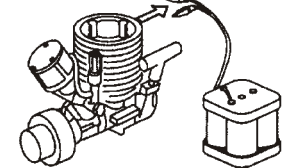
Quickly pull the starter rope (to start the engine).



Adjust by screwing the needle little by little.

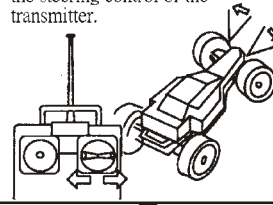


Remove the clips from the engine.

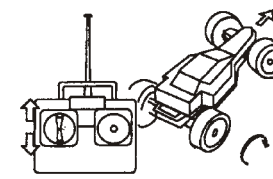


## While Running

Check that the model turns in proportion to the amount you move the steering control of the transmitter.

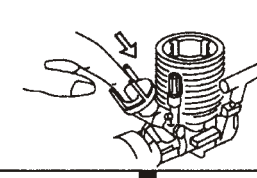


Check that the speed of the model changes in proportion to the amount you move the speed control of the transmitter.

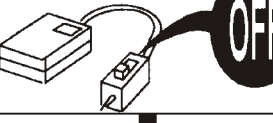


## After Running

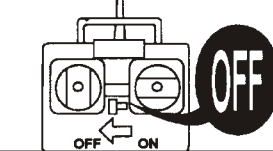
By pushing with your fingers the air cleaner, interrupt the engine.



Switch off receiver.



Switch off transmitter.



Proper maintenance extends the life of the model.

Use genuine parts.

## Cautions for Safety

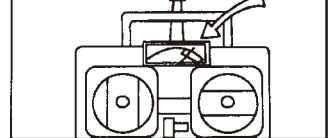
Do not run your model through water. This may cause rust or electrical problems.



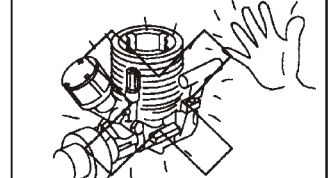
If model does not operate correctly stop it and find the cause.



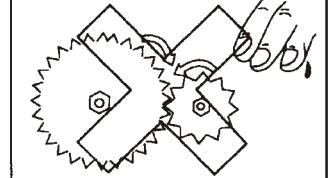
Check the batteries.



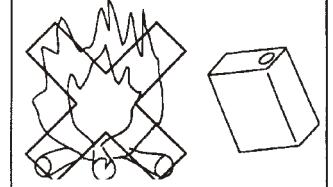
After each run, the model is hot. Beware of getting burned.



Keep hands and tools away from moving parts.



Never throw burning, gleaming or smouldering things into fuel cans even if these happen to be empty. This is very dangerous to life!!

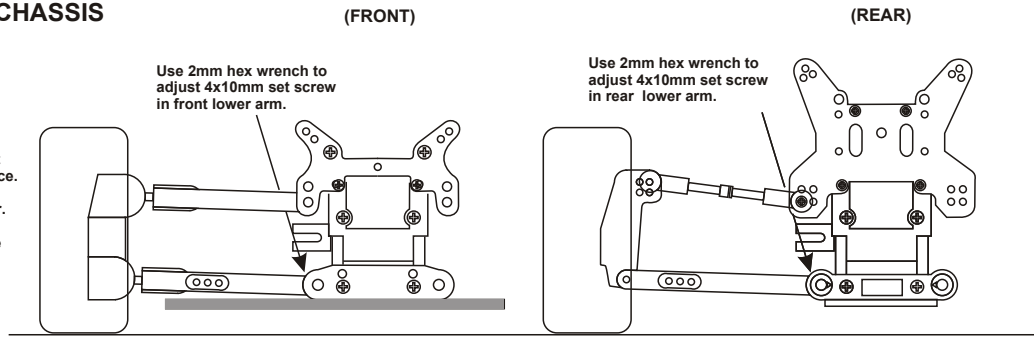




# SETTING UP

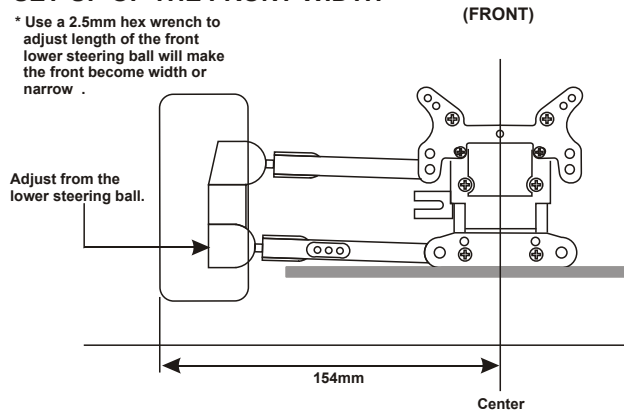
## ADJUSTMENT OF THE CHASSIS CLEARANCE

- Place the model car on flat surface. Use 2mm hex wrench to adjustment the chassis to it's minimum clearance.
- We Suggest: 10mm in front and rear.
- Adjustment of the right and left-side are the same height.

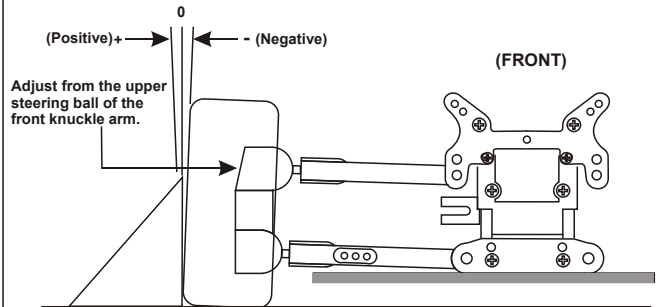


## SET-UP OF THE FRONT WIDTH

- \* Use a 2.5mm hex wrench to adjust length of the front lower steering ball will make the front become width or narrow .



## ADJUSTMENT OF THE FRONT AND REAR CAMBER

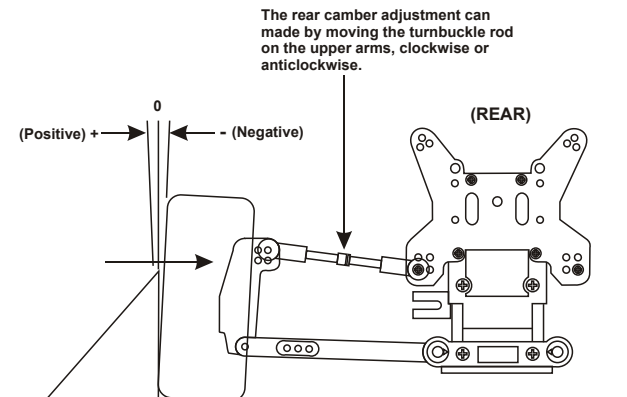
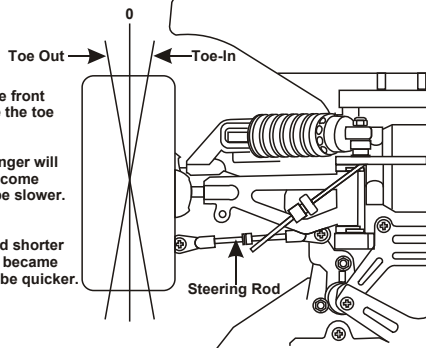


## FRONT TOE-IN AND TOE-OUT SETTING

Adjust the length of the front steering rod to change the toe angle.

Making the steering longer will make the front tires become toe-in. Response will be slower.

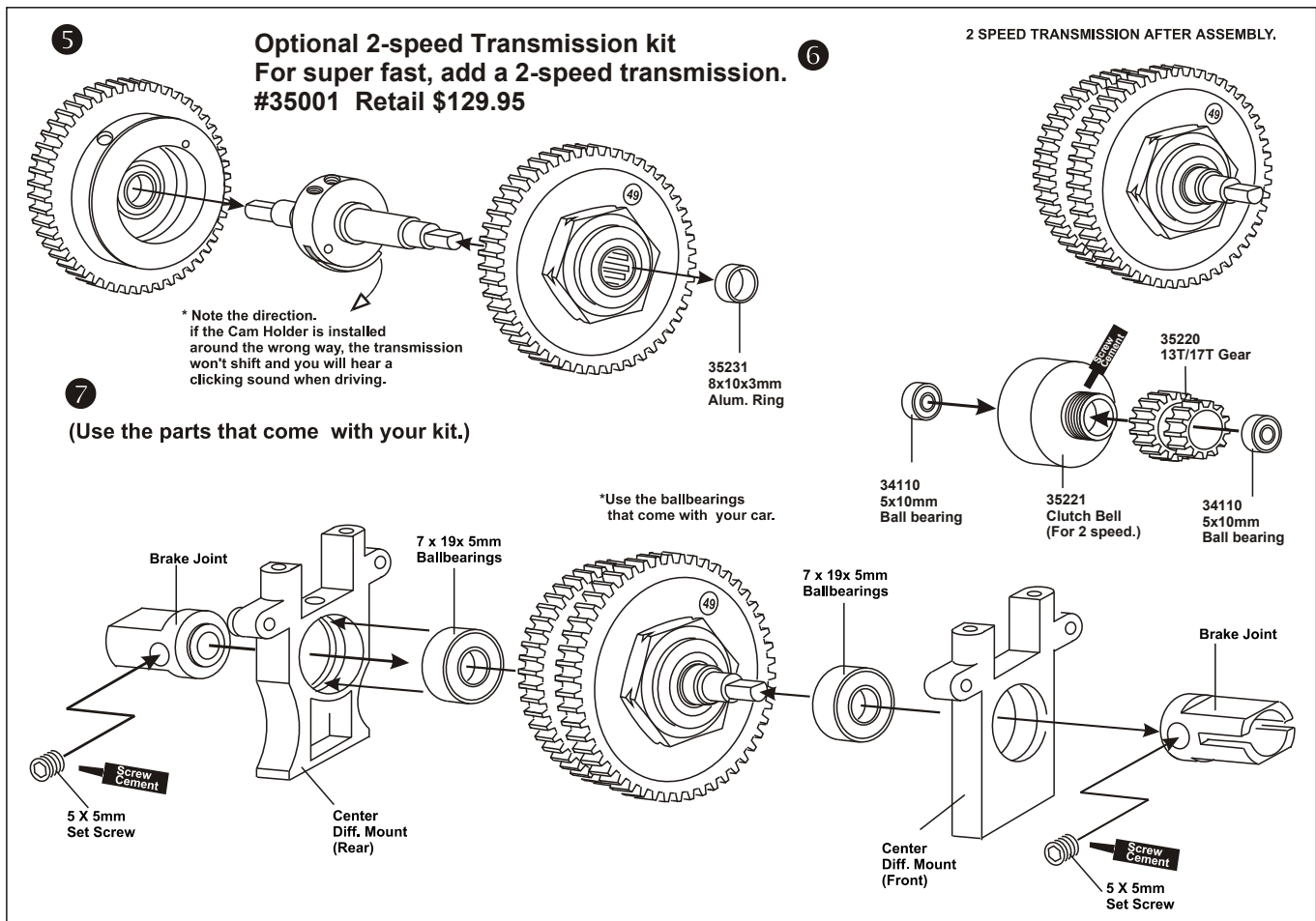
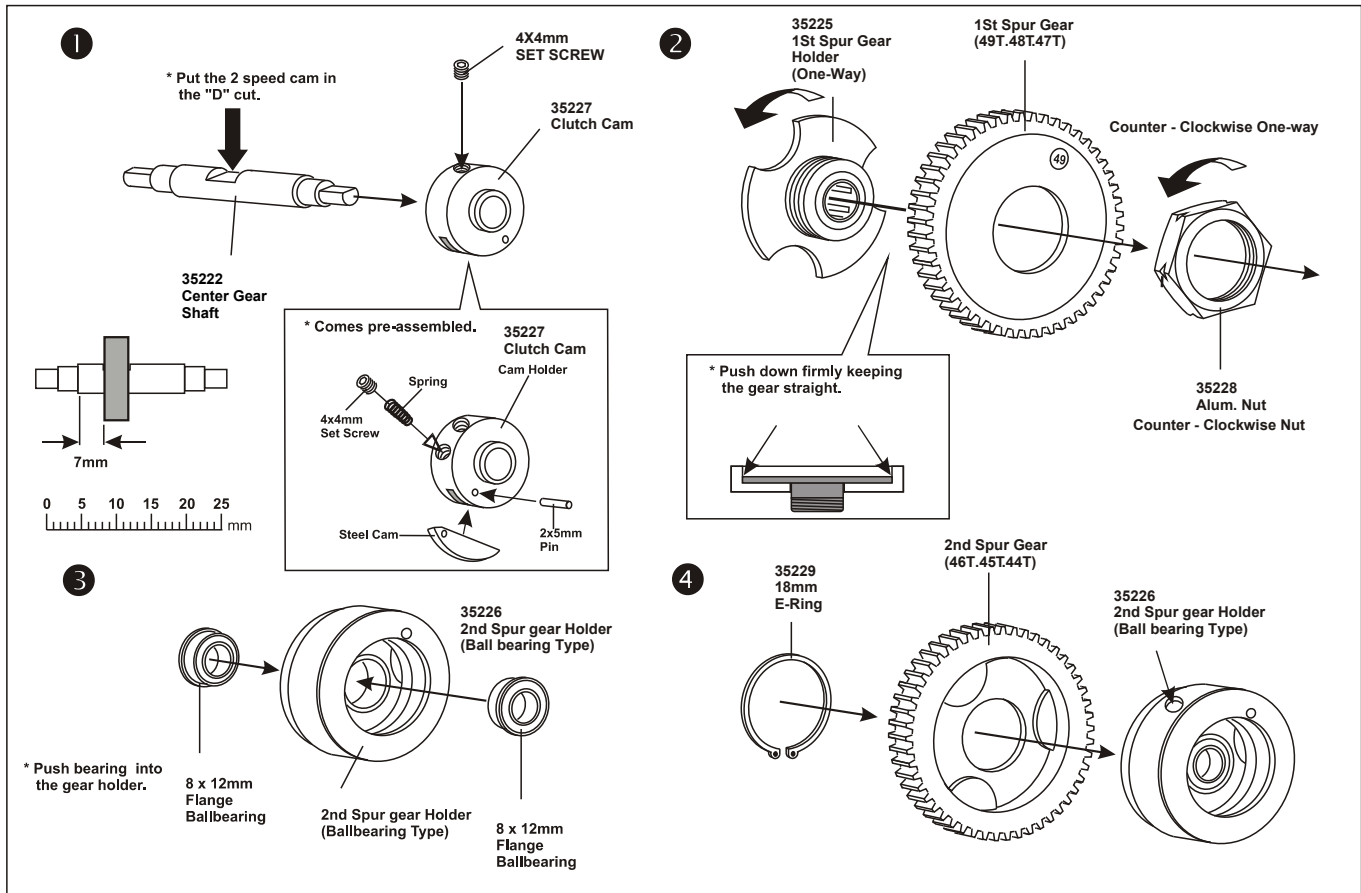
Making the steering rod shorter will make the front tire became tor-out. Response will be quicker.





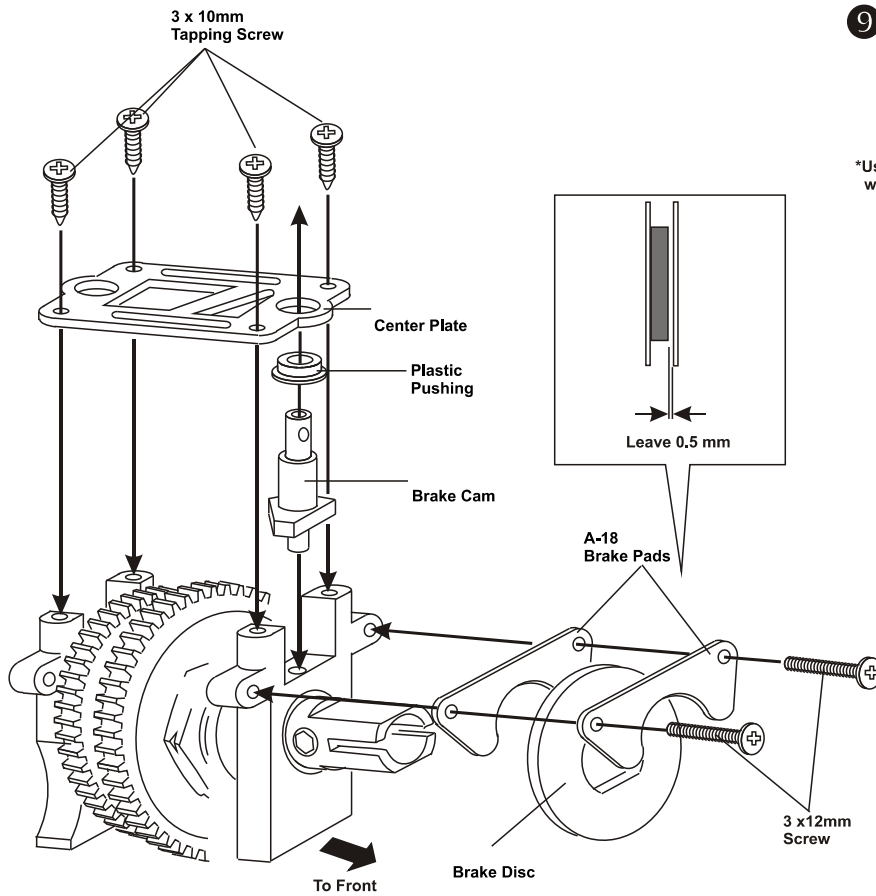
# INSTRUCTIONS

## OPTION PARTS OF THE 2-SPEED TRANSMISSION

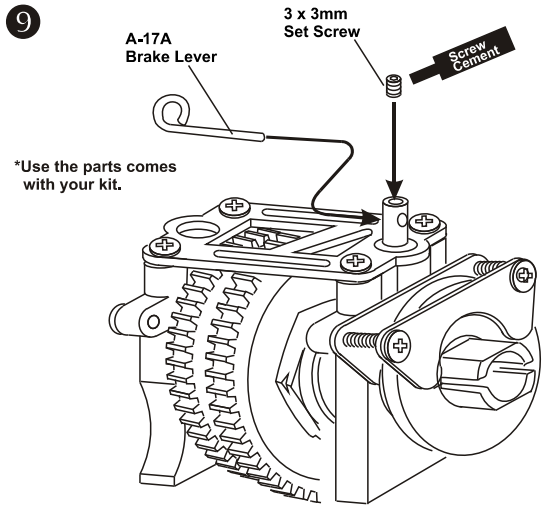




**8** (Use the parts that come with your kit.)



**9**





## ADJUSTING THE SHIFT POINT

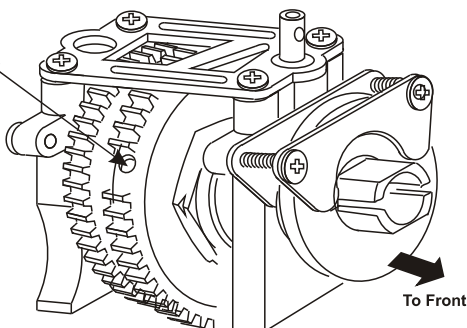
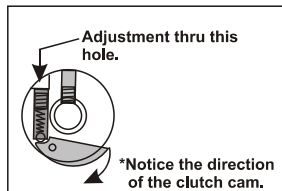
\* Adjust the engine before adjusting the clutch shift timing.  
Adjust the engine as per engine instruction manual.

\* Use a 2mm allen wrench to set the clutch cam.

2mm Allen Wrench

Clockwise (Tighten)

Anti-clockwise (Loosen)



- Once the engine adjustment have been completed, proceed to adjustment of the clutch shift timing.  
(Using a 2mm allen wrench to adjustment the clutch cam.)

Note:

Clockwise-----Shift timing will become slower.  
Anticlockwise---Shift timing will become quicker.

- Adjust the clutch shift timing for your track conditions with 4x4mm set screw.  
As you tighten (Clockwise) the 4x4mm set screw, the shift timing will become slower.  
As you loosen (Anticlockwise) the 4x4mm set screw, the shift timing will become quicker.

- Set the shift timing to the track conditions while the car is running.

The #293 2-speed transmission allows the car to have more punch out of the corners and higher top speed.  
We offer many different pinion and spur gear combinations which can be used for different tracks.

## 2 SPEED GEAR RATIO COMBINATIONS

二段變速齒輪組合

IMPORTANT:

The sum of the spur gear and clutch gear for 1st gear must be equal  
the sum of the spur gear and clutch gear for 2nd gear to be equal.

Example: 1st gear  $45+13=58$   
2nd gear  $41+17=58$  Must be equal

( STANDARD ) (標準)

SPUR GEAR	CLUTCH GEAR (4 tooth difference)			
49T/45T	13T/17T	14T/18T	15T/19T	
48T/44T				
47T/43T				

Short Track  
Torque  
Long Track  
Top Speed

## 2 SPEED OPTION PARTS

二段變速零件

SPUR GEAR(1st):

大齒(一段用)

N0.	Description
294A	49T Spur Gear
294B	48T Spur Gear
294C	47T Spur Gear

SPUR GEAR(2nd):

大齒(二段用)

N0.	Description
294D	46T Spur Gear
294E	45T Spur Gear
294F	44T Spur Gear

CLUTCH GEAR:

碗公齒(二段用)

N0.	Description
294G	13T/17T Gear
294H	14T/18T Gear
294I	15T/19T Gear

## 2 SPEED PARTS

二段變速零件

N0.	Description
293A	1st Spur Gear Holder
293B	2nd Spur Gear Holder
293C	Clutch Cam Set
293D	Alum. Nut (Anti-Clockwise)
293E	18mm E-Ring
293F	8x12mm Flange Ballbearing
293G	8x10x3mm Alum. Ring
B-2	Center Shaft
C-11	5x10x4mm Ballbearing
220L	Clutch Bell

35001	HN-293	2-SPEED KITS, HODR, ULTRA'S, BLAZER, GTP, REV 2	126.95
35002	HN-221	2-SPEED KIT, INFERNO (NOT MP5/ 6)	126.95
35003	HN-221	2-SPEED KIT, INFERNO (NOT MP5/ 6)	126.95
35220	HN-294G	GEARS, 2-SPEED SET, 13T/17T REV 2	19.95
35221	HN-220L	BASE, CLUTCH BELL, SCREW-ON BASE REV 2	28.95
34110	C-11	BEARING, 5x10mm 2 PCS.	7.95
35222	B-02	SHAFT, OFNA CARS, 2-SPEED REV2	11.95
35223	B-0	SHAFT, KYOSHO 7.5, 2-SPEED REV2	11.95
35224	B-0	SHAFT, MUGEN MBX, 2-SPEED REV2	11.95
35225	HN-293A	ALUM.HOLDER, 1ST GEAR, 2-SPEED REV2	26.95
35226	HN-293B	ALUM.HOLDER, 2ND GEAR, 2-SPEED REV2	24.95
35227	HN-293C	CLUTCH CAM DISC., 2-SPEED REV2	13.95
35228	HN-293D	ALUM. NUT, CCW NUT, LARGE, 2-SPEED REV2	2.95
35229	HN-293E	E-CLIP, 18mm	0.95
35230	HN-293F	BEARING, 8x12 FLANGE, 2 PCS.	12.95
35231	HN-293G	ALUM. SPACER, 8x10mm	1.95
35232	HN-294H	GEARS, 2-SPEED SET, 14T/18T REV 2	19.95
35233	HN-294I	GEARS, 2-SPEED SET, 15T/19T REV 2	19.95
35249	HN-294A	SPUR GEAR, 49T, 2-SPEED REV2	11.95
35246	HN-294D	SPUR GEAR, 46T, 2-SPEED REV2	11.95
35248	HN-294B	SPUR GEAR, 48T, 2-SPEED REV2	11.95
35247	HN-294C	SPUR GEAR, 47T, 2-SPEED REV2	11.95
35245	HN-294E	SPUR GEAR, 45T, 2-SPEED REV2	11.95
35244	HN-294F	SPUR GEAR, 44T, 2-SPEED REV2	11.95



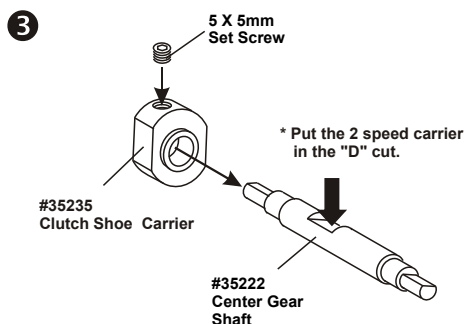
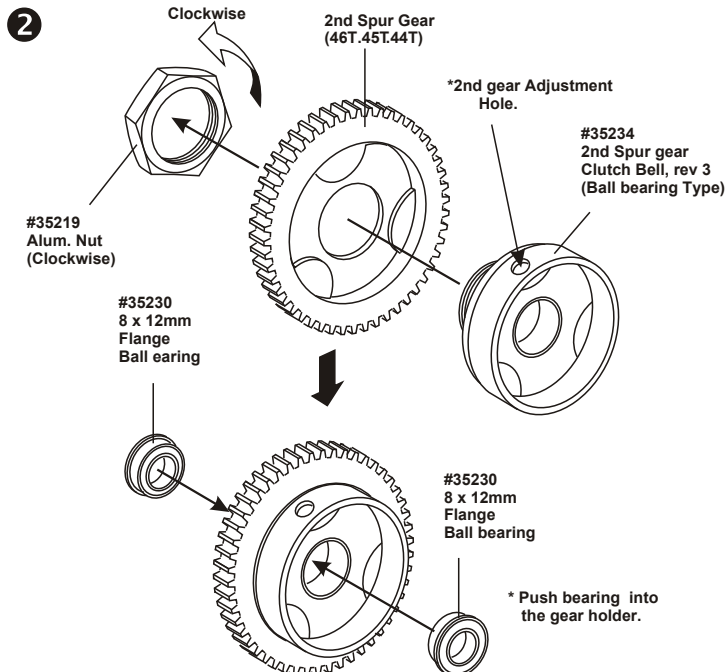
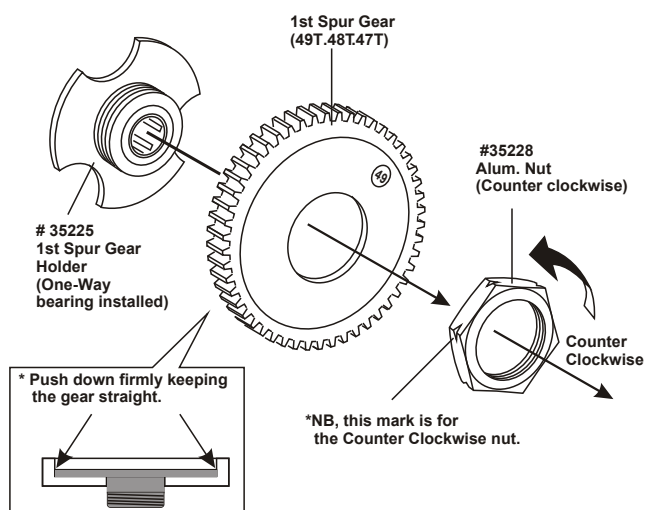
# INSTRUCTIONS

## #35011 1/8 SCALE 2-SPEED TRANSMISSION SET (Shoes Type)

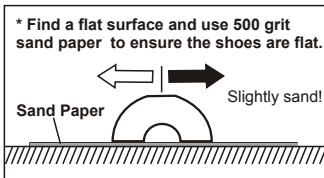
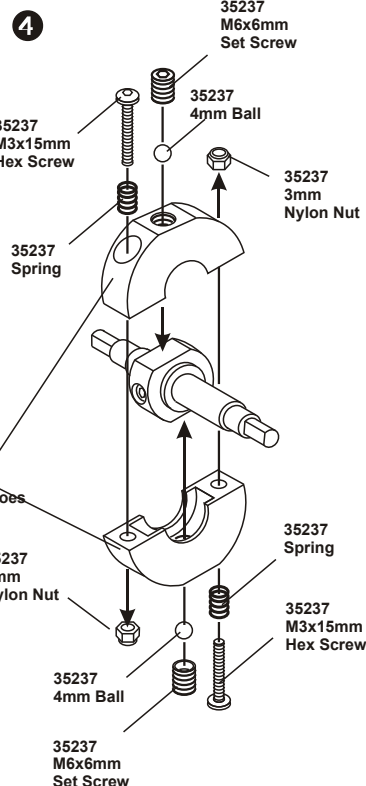
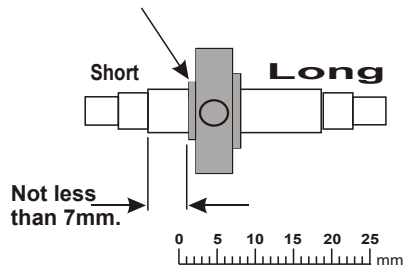
*\* This professional two speed transmission is only for ULTRA GT series and ULTRA GTP series kits.*

### 1 OFNA RACING INSTALLATION SHEETS

#35011 1/8 SCALE 2-SPEED TRANSMISSION SET (Shoes Type)

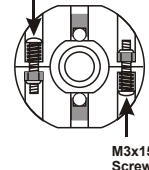


**\* Note: Put the small ring on the short side.**

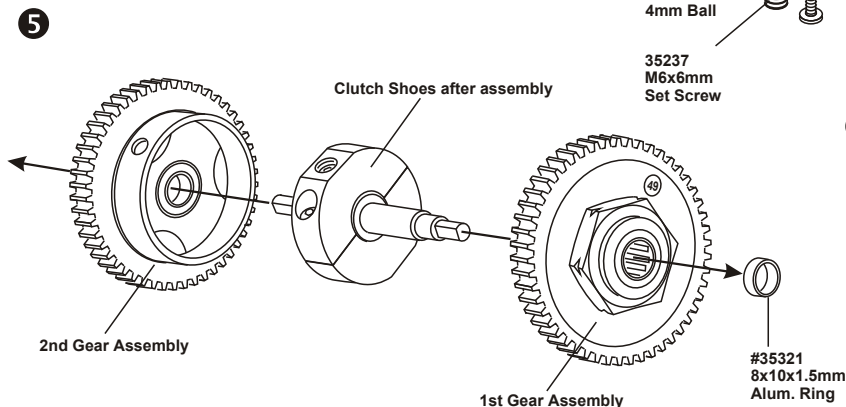
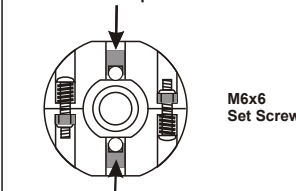


#### \* Important Pre-Setup

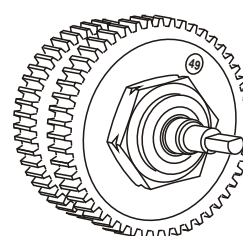
\* Screw M3x15mm screw in until spring compresses, do not crush! Back screw off 5 turns. Shoe assembly should set into alum. Clutch holder.



\* Tighten Set Screws M6x6mm slightly to allow pressure from ball to hold center cam. Do not over tighten. Adjust both screws for an even amount of pressure.



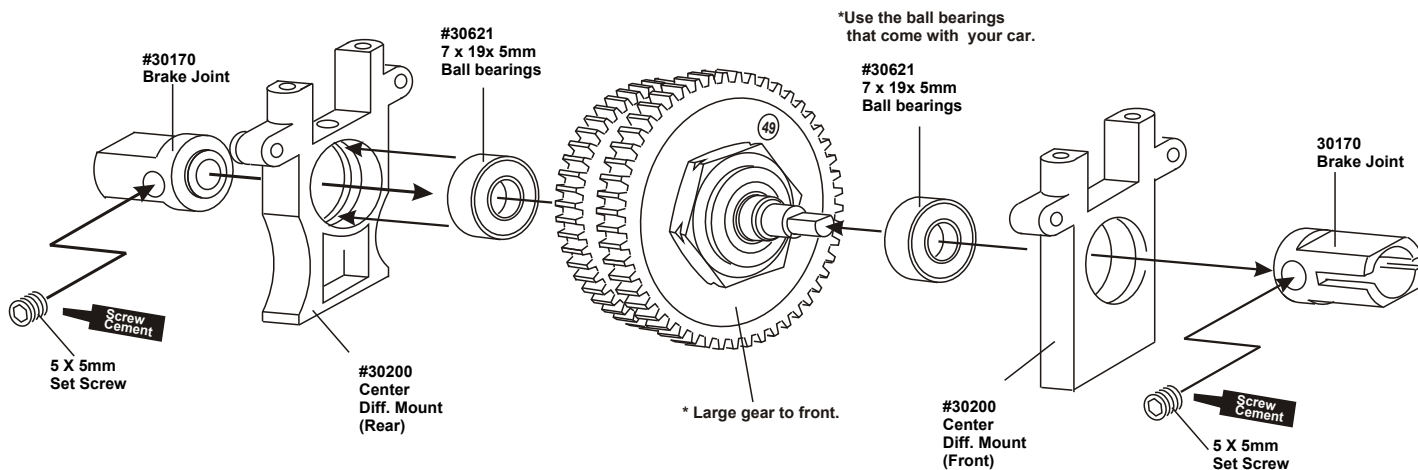
#### 6 2 SPEED TRANSMISSION AFTER ASSEMBLY.



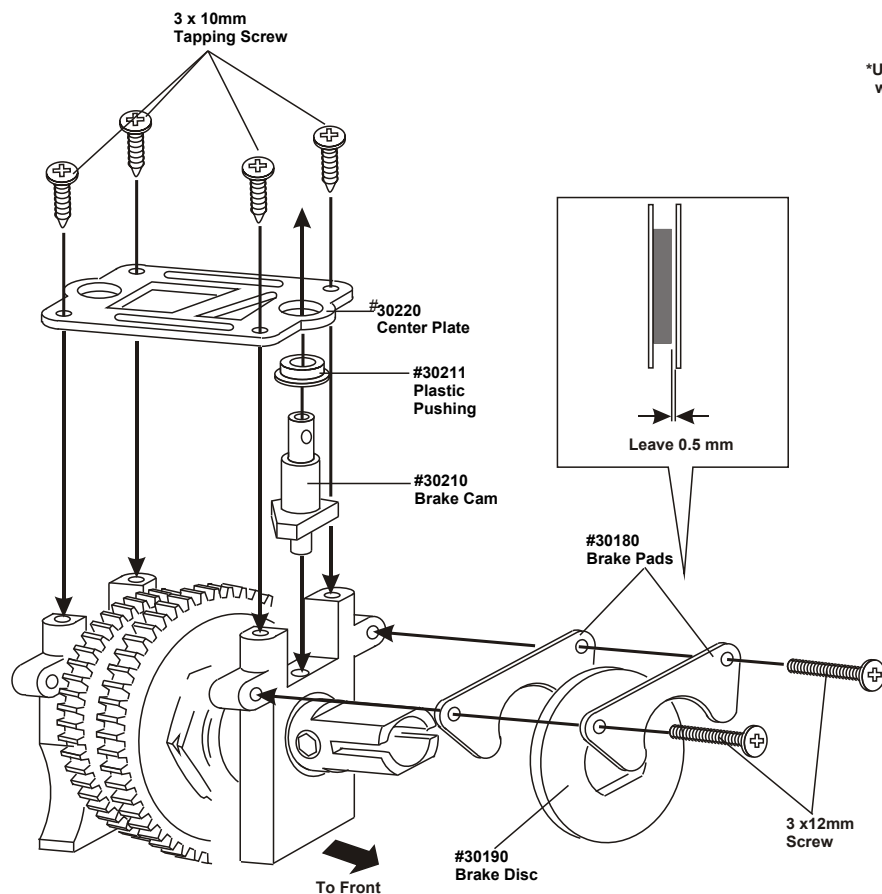


## 7 ASSEMBLY OF THE 2 SPEED TRANSMISSION INTO CENTER MOUNT

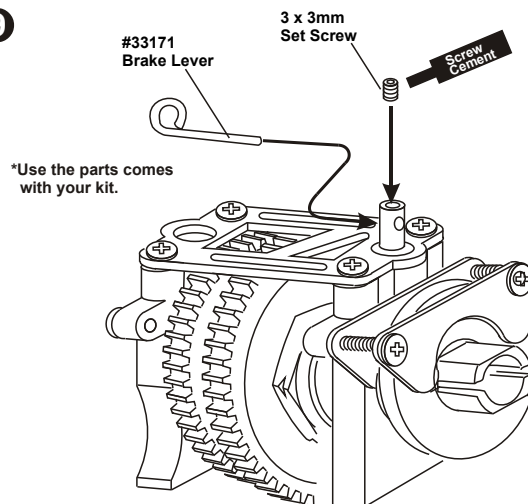
(Use the parts that come with your kit.)



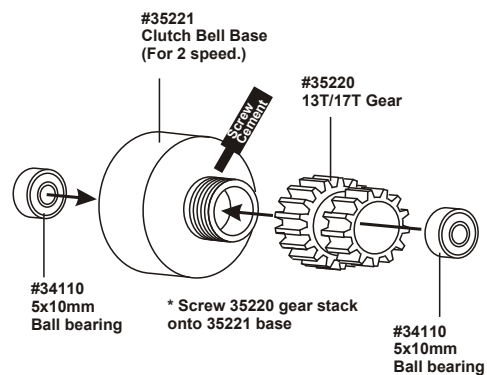
8



9



### ASSEMBLY OF THE CLUTCH BELL

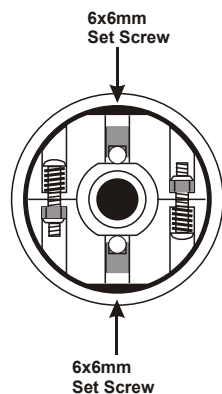




## ADJUSTING THE SHIFT POINT

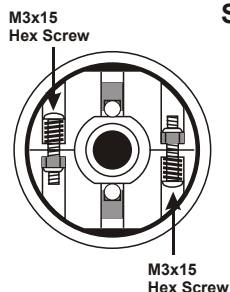
\* Adjust the engine before adjusting the clutch shift timing.  
Adjust the engine as per engine instruction manual.

\* Two steps to adjust the shoes and shift timing.



### AIR GAP SETTING

1. Use a 2.5 mm allen wrench to adjust shoe assembly air gap. Tighten Set Screws, M6x6mm, to adjust the air gap between the shoe assembly and clutch bell wall. Adjust both screws for an even amount of gap of about 1mm.



### SHIFT TIMING SETTING

2. Use a 2mm allen wrench to adjust the shift timing. Turn, M3x15mm, screws IN until spring compresses, do not crush! Back off screw 5 turns, this is a good place to start.

When adjusting shift timing, always turn each screw the same number turns.

2mm and 2.5mm  
Allen Wrench

Clockwise  
(Tighten)

Counter-clockwise  
(Loosen)

Adjustment thru  
this hole.

To Front

\* Use a 2mm and 2.5mm allen wrench to set the clutch shoes.

1. Once the engine adjustments have been completed, proceed to the adjustment of the clutch shift timing.  
(Using a 2mm allen wrench to adjust the clutch shoes.)

Note:

Clockwise-----Shift timing will become slower.  
Counter Clockwise---Shift timing will become quicker.

2. Adjust the clutch shift timing for your track conditions.  
As you tighten (Clockwise) the 3x15mm hex screw, the shift timing will become slower.  
As you loosen (Counter Clockwise) the 3x15mm hex screw, the shift timing will become quicker.

3. Set the shift timing to the track conditions while the car is running.

## 2 SPEED GEAR RATIO COMBINATIONS

The #35011 2-speed transmission has a smoother gear change and is less aggressive on the 2nd gear. We offer many different pinion and spur gear combinations which can be used for different tracks.

### IMPORTANT:

The sum of the spur gear and clutch gear for 1st gear must be equal the sum of the spur gear and clutch gear for 2nd gear to be equal.

**Example:** 1st gear  $45+13=58$   
2nd gear  $41+17=58$  Must be equal

( STANDARD )

SPUR GEAR	CLUTCH GEAR (4 tooth difference)			
49T/45T	13T/17T	14T/18T	15T/19T	16T/20T
48T/44T	←————→			
47T/43T				

Short Track  
Torque  
Long Track  
Top Speed

## 2 SPEED OPTION PARTS

SPUR GEAR(1st):	USA Parts No.	Description	(STD)
	No.35249	49T Spur Gear	
	No.35248	48T Spur Gear	
	No.35247	47T Spur Gear	

SPUR GEAR(2nd):	USA Parts No.	Description	(STD)
	No.35246	46T Spur Gear	
	No.35245	45T Spur Gear	
	No.35244	44T Spur Gear	

CLUTCH GEAR:	USA Parts No.	Description	(STD)
	No.35220	13T/17T Gear	
	No.35232	14T/18T Gear	
	No.35233	15T/19T Gear	

## 2 SPEED SPARE PARTS

USA Parts No.	Description
35225	1st Spur Gear Holder
35228	Alum. Nut (Counter-Clockwise)
35230	8x12mm Flange Ball bearing
35222	Center Shaft
34110	5x10x4mm Ball bearing
35221	Clutch Bell Base
35249	49T Spur Gear (1st)
35245	45T Spur Gear (2nd)
35234	2nd Spur Gear Clutch Bell
35235	Clutch Shoe Carries
35219	Alum. Nut (Clockwise)
35236	2nd Clutch Shoes
Misc Parts	Spring
	4mm Ball
	6x6mm Set Screw
	3x15mm Hex Screw
35237	
35321	8x10x1.5mm Alum. Ring



# OPTIONAL Rear Pivot Ball Suspension Kit For "ULTRA GTP" #31300

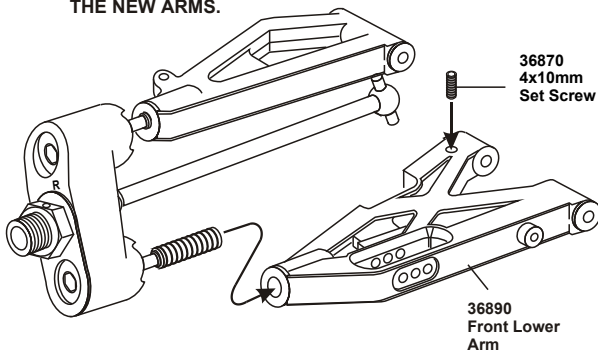
This rear pivot ball kit is suitable for those who already have "ULTRAGTP" car kit.

## ASSEMBLY OF THE NEW FRONT LOWER ARM

\* Follow these instructions to assemble this kit.

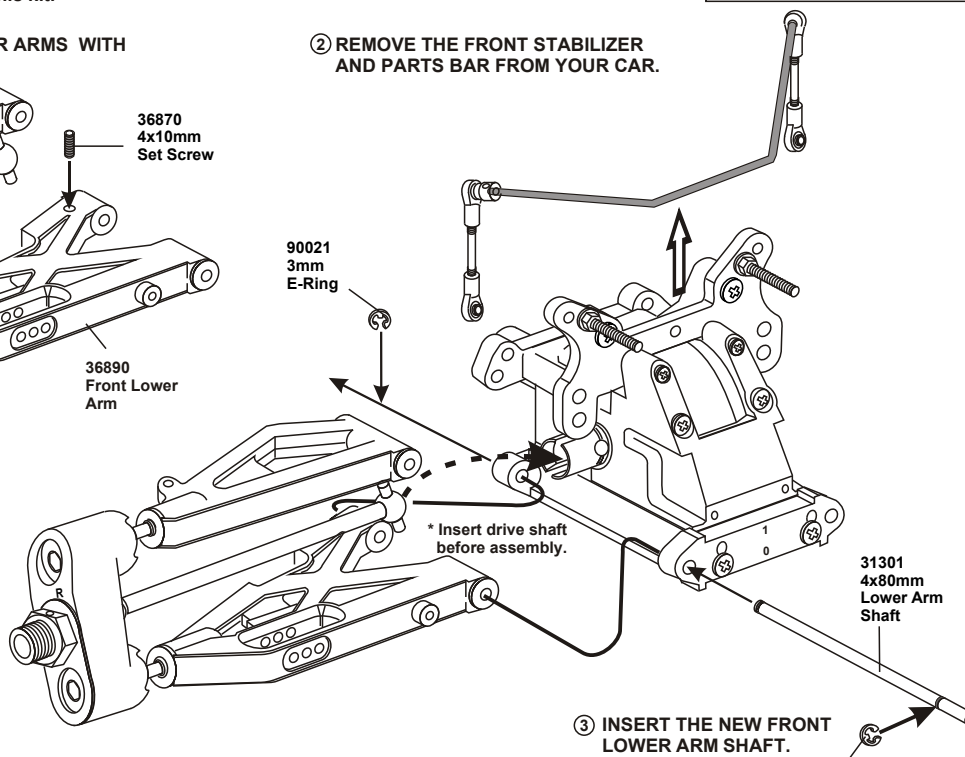
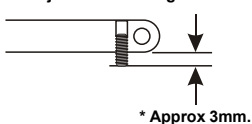
Assembly of the right and left hand side are the same.

- ① REPLACE THE OLD FRONT LOWER ARMS WITH THE NEW ARMS.

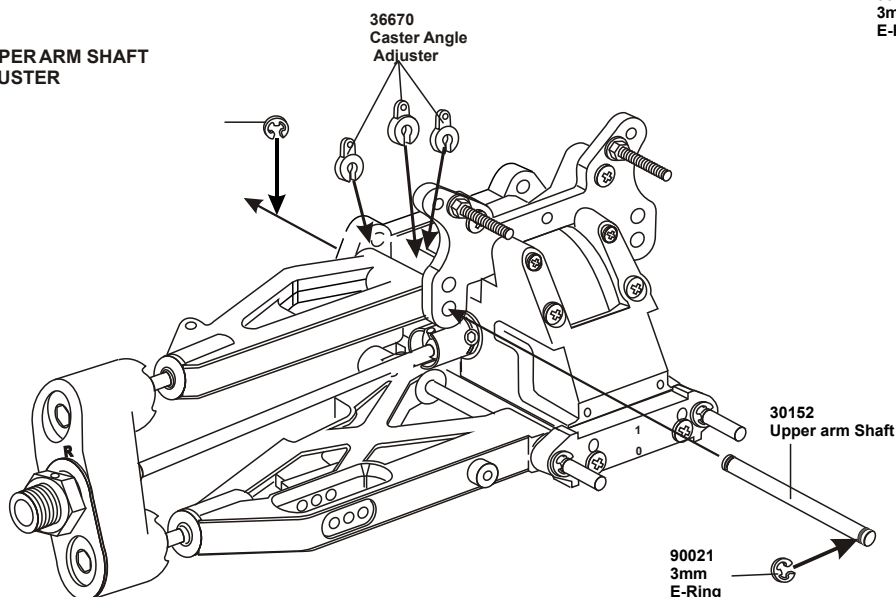


- ② REMOVE THE FRONT STABILIZER AND PARTS BAR FROM YOUR CAR.

\* A 4 x 10mm set screw is used to adjust the ride height.

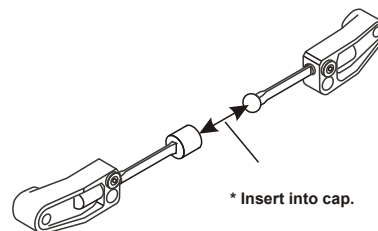
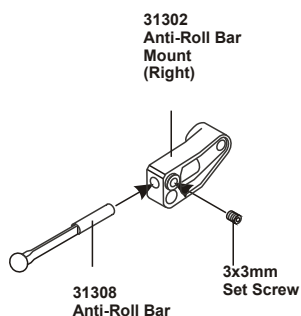
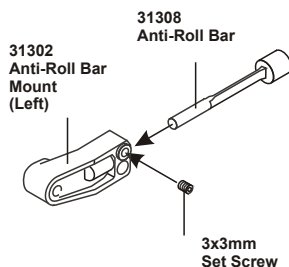


- ④ ASSEMBLY OF THE UPPER ARM SHAFT AND THE CASTER ADJUSTER



## ASSEMBLY OF THE ANTI-ROLL BAR

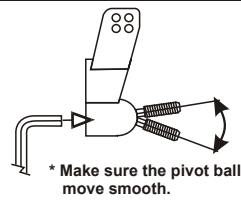
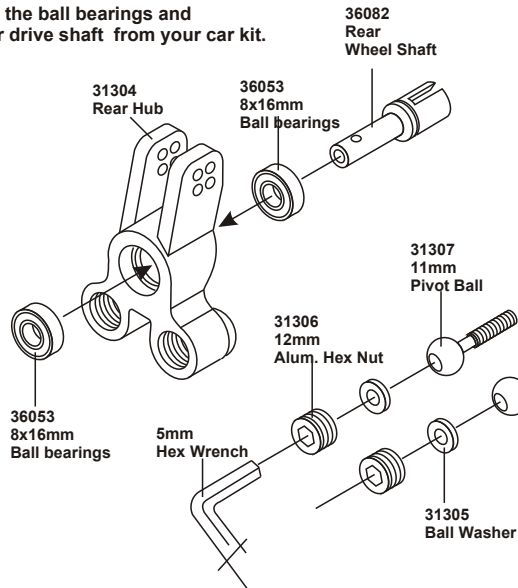
\* Builds two sets of anti-roll bars for the front and rear.



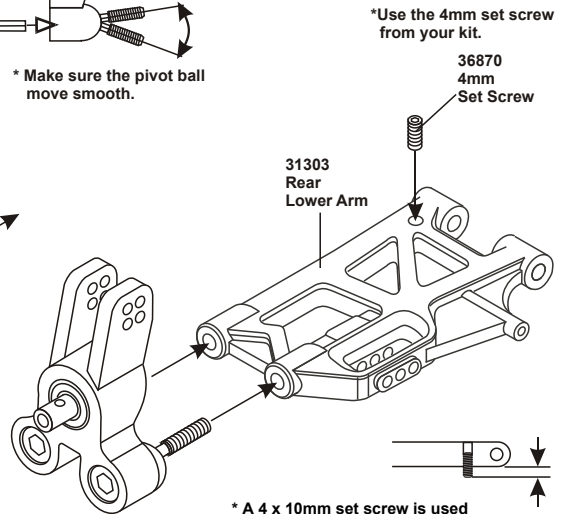


## ASSEMBLY OF THE REAR HUB

\* Use the ball bearings and rear drive shaft from your car kit.



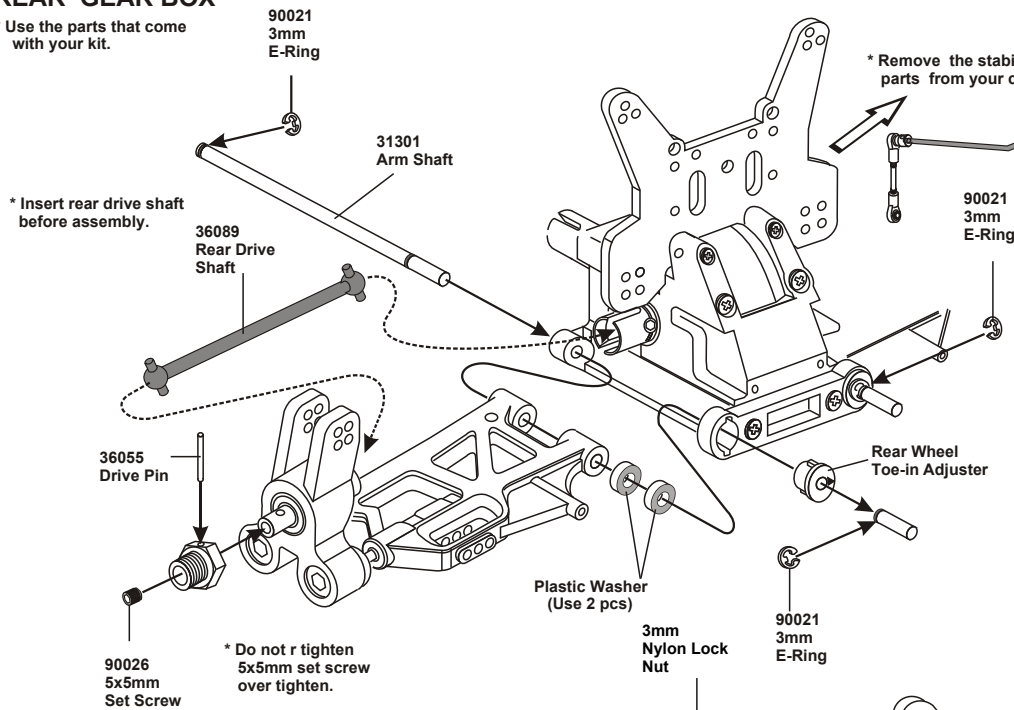
Assembly of the right and left hand side are the same.



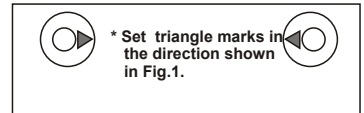
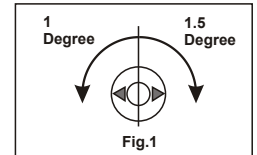
\* A 4 x 10mm set screw is used to adjust the ride height. \* Approx 3mm.

## ASSEMBLY OF THE SUSPENSION ARMS ONTO REAR GEAR BOX

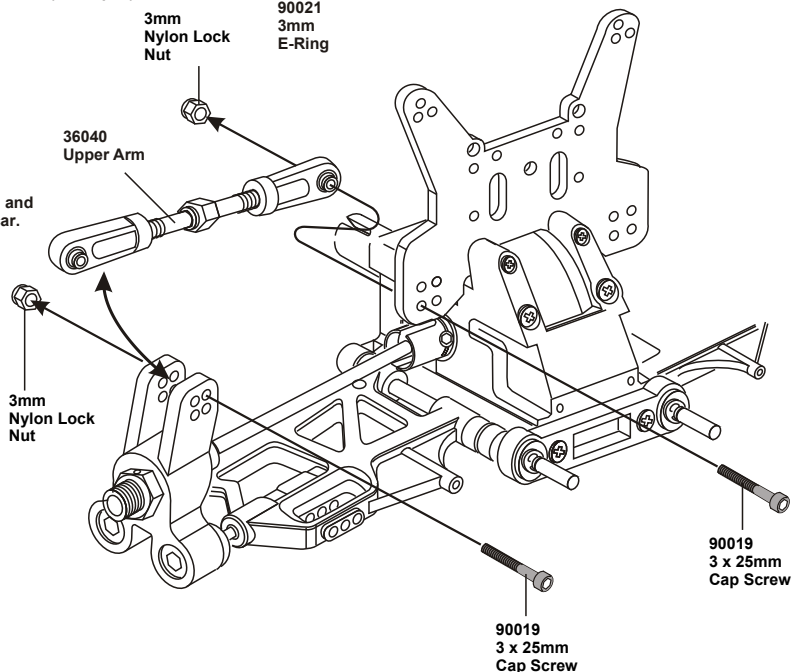
\* Use the parts that come with your kit.



Assembly of the right and left hand side are the same.



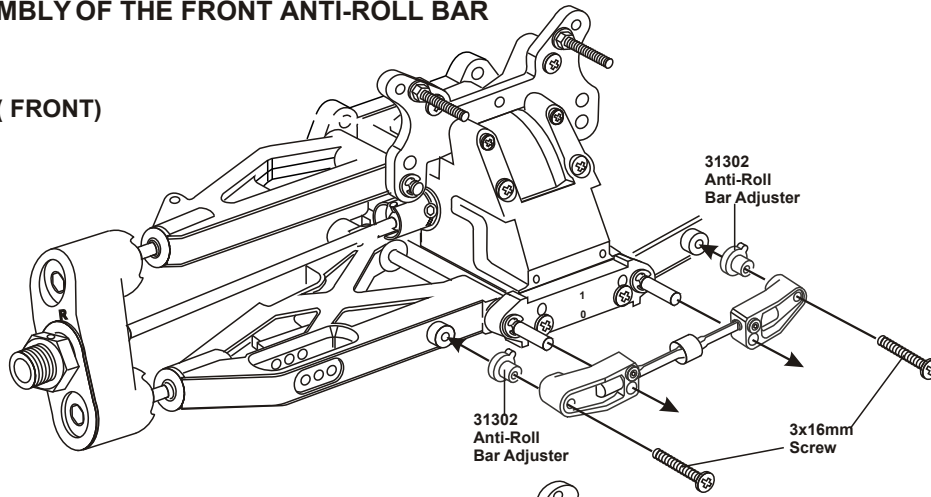
\* Use the upper arm and screw from your car.



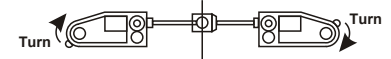
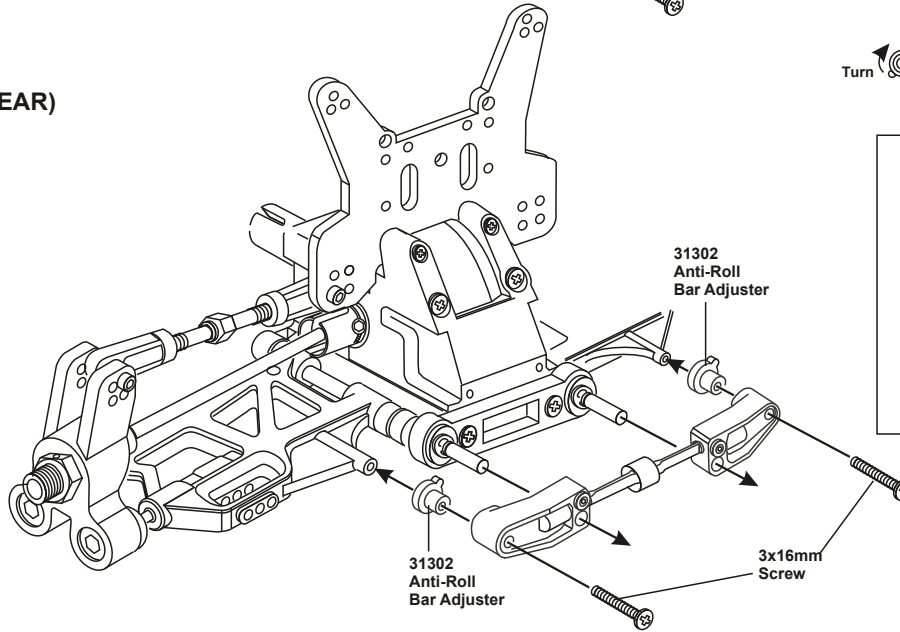


## ASSEMBLY OF THE FRONT ANTI-ROLL BAR

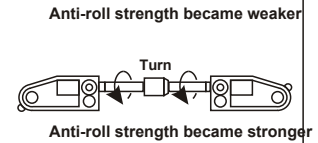
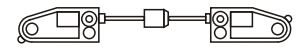
( FRONT )



( REAR )



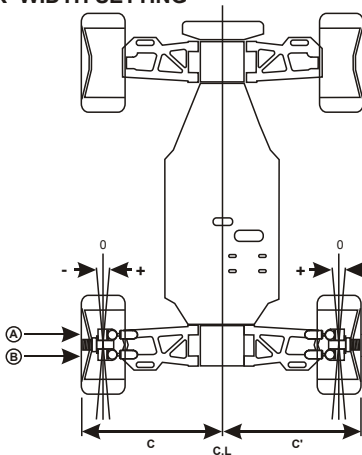
Changing the angle of the anti-roll bar will change the strength of the arms



ASSEMBLE THE FRONT AND REAR GEAR BOX ONTO YOUR CAR AS USUAL.

## SETTING GUIDE

### REAR WIDTH SETTING



Adjust A and B to the same length.

Adjusting B longer will make the rear tires toe-in (Positive).

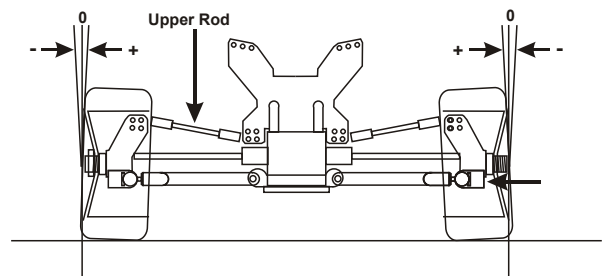
Adjusting A longer will make the rear tires toe-out (Negative).

\* Use a 2.5mm hex wrench to adjust the rear track width.

### REAR CAMBER SETTING

The rear camber adjustment can be made by changing the length of the upper rod.

Making the upper rod longer will make the camber positive. Making the upper rod shorter will make the camber negative.



## PARTS LIST

Item No.	Description	Qty
31308	Anti-Roll Bar	1 set
31301	4x80mm Arm Shaft	2 pcs
31302	Anti Roll Bar Mount / Adjuster	1 set
36890	Front Lower Arm	1 set
31303	Rear Lower Arm	1 set

Item No.	Description	Qty
31304	Rear Hub (Pivot Ball Type)	2 pcs
31305	Ball Washer	4 pcs
31302	Anti Roll Bar Mount / Adjuster	1 set
31306	Alum. Hex Nut	4 pcs
31307	Pivot Ball	2 pcs.